

NEGATIVE DECLARATION

Marin County

Environmental Coordination and Review

Pursuant to Section 21000 et. seq. of the Public Resources Code and Marin County Environmental Impact Review Guidelines and Procedures, a Negative Declaration is hereby granted for the following project.

1. Project Name: San Geronimo Fire Station Project
2. Location and Description: 5800 Sir Francis Drake Blvd., San Geronimo

In December 2022, the County entered into an option agreement for purchase of the 157-acre property from the Trust for Public Land (TPL). The proposed project is to construct new facilities and repurpose existing facilities for a new location for Marin County Fire Department headquarters. New facilities would include a state-of-the-art fire station, warehouse/storage, and vehicle maintenance and repair. The former golf course clubhouse building would be repurposed to serve as the administrative offices and training center for the Marin County Fire Department. The environmental review covers the entire 157-acre property.

3. Project Sponsor: Marin County Fire Department
4. Finding:

Based on the attached Initial Study and without a public hearing, it is my judgment that:

- The project will not have a significant effect on the environment.
- The significant effects of the project noted in the Initial Study attached have been mitigated by modifications to the project so that the potential adverse effects are reduced to a point where no significant effects would occur.



Date: 11/30/2023

Environmental Planning Manager

Based on the attached Initial Study, a Mitigated Negative Declaration is granted.

[] Board of Supervisors

See approval resolution following project approval on _____

1. Mitigation Measures:

- No potential adverse impacts were identified, therefore, no mitigation measures are required.
- Please refer to mitigation measures in the attached Initial Study.

All of the mitigation measures for the above effects have been incorporated into the project and are embodied in conditions of approval recommended by the Marin County Community Development Agency- Planning Division.

Other conditions of approval in support of these measures may also be advanced.

2. Preparation:

This Negative Declaration was prepared by Sicular Environmental Consulting and Natural Lands Management on behalf of the Marin County Community Development Agency - Planning Division. Copies may be obtained at the address listed below.

Marin County Community Development Agency
Planning Division
3501 Civic Center Drive, Suite 308
San Rafael, CA 94903
(415) 473-6269

Check with the Planning Department for information about business hours and/or reviewing copies of the document at the front counter.

An electronic version is also available for review on the County of Marin [Environmental Planning website](#).

**MARIN COUNTY COMMUNITY DEVELOPMENT AGENCY
PLANNING DIVISION**

INITIAL STUDY

SAN GERONIMO FIRE STATION

I. BACKGROUND

- A. Project Sponsor's Name and Address:** **Marin County Fire Department**
P.O. Box 518
Woodacre, CA 94973
- B. Lead Agency Name and Address:** **Marin County Community
Development Agency**
3501 Civic Center Dr., Suite 308
San Rafael, CA 94903
- C. Agency Contact:** **Tammy Taylor, Senior
Environmental Planner**
(415) 473-6269
tammy.taylor@marincounty.gov

II. PROJECT DESCRIPTION

- A. Project Title:** **San Geronimo Fire Station**
- B. Type of Application(s):** **Land Purchase**
- C. Project Location:** **5800 Sir Francis Drake Blvd, San
Geronimo, APN # 172-371-04, 168-
250-41, 172-372-14, and
172-372-01**
- D. General Plan Designation:** **RC-Recreational Commercial**
- E. Zoning:** **RCR – Resort and Commercial
Recreation**

II.F. Description of Project:

INTRODUCTION AND SUMMARY

Marin County is proposing to purchase the former San Geronimo Valley National Golf Course property, located along Sir Francis Drake Boulevard and Nicasio Valley Road in the unincorporated San Geronimo Valley area, and develop a new headquarters and fire station for the Marin County Fire Department (MCFD). The purchase of the property, and subsequent construction and operation of the fire station, is the “Project” analyzed in this Initial Study. The entire 157-acre property is the “Project site.” The current owner is the Trust for Public Land (TPL). The County is proposing to purchase the entire property, and to construct a new fire station and repurpose existing facilities for a new location for MCFD headquarters. MCFD’s current headquarters and one of its fire stations are located about 1.5 miles east of the Project site, in Woodacre, and the Project would replace most, but not all, of those facilities.

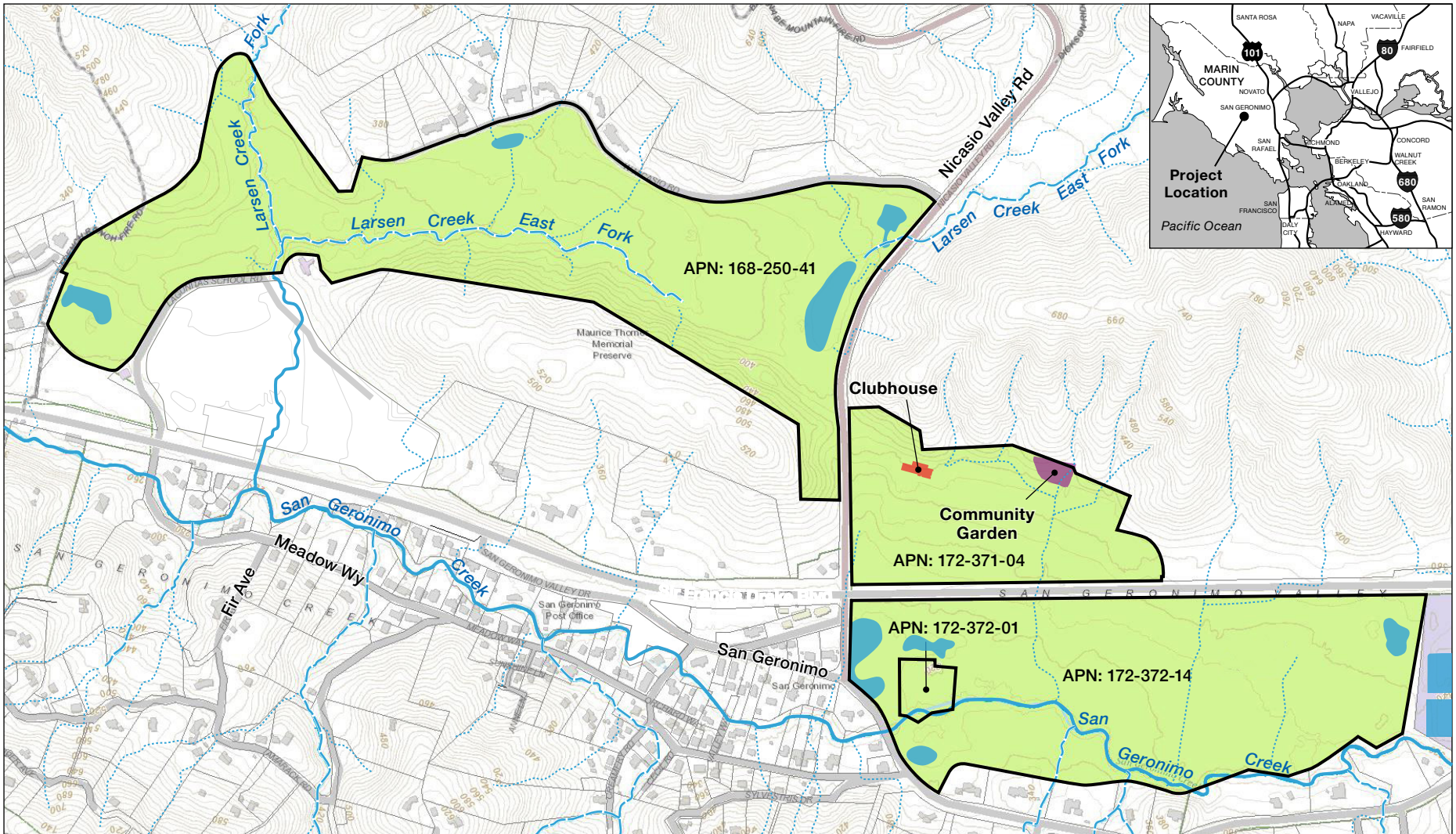
New facilities would include a state-of-the-art fire station and firefighter training facilities. The former golf course clubhouse building would be repurposed to serve as the administrative offices for MCFD. The new facilities, totaling about 25,000 square feet (sf) would be constructed on the “Clubhouse Parcel” (APN 172-371-04), located northeast of the intersection of Sir Francis Drake Boulevard and Nicasio Valley Road (Figure 1). The remainder of the Project site (APNs 168-250-41, 172-372-14, and 172-372-01) is encumbered by a conservation easement granted by TPL to the Marin Open Space Trust (MOST) for the protection and enhancement of salmonid habitat in San Geronimo Creek and Larsen Creek, which flow through the Project site. Apart from MCFD facilities, the Project site would continue to be used for open space and passive recreational uses, including continuation of an existing community garden and trail access. Marin County Parks would manage the open areas and recreational facilities.

The proposed purchase of the Project site and development of the fire station and headquarters are discretionary actions, which the Marin County Board of Supervisors will have the authority to approve. The proposal therefore qualifies as a “project” under the California Environmental Quality Act (CEQA).¹ CEQA is a California State law that requires environmental review of certain projects subject to discretionary approval by local or State agencies.

PROJECT LOCATION AND SETTING

The Project site (Figures 1 and 2) is located within the San Geronimo Valley in central Marin County, near the unincorporated communities of San Geronimo Village and Woodacre (Figure 3). Other unincorporated communities in San Geronimo Valley include Forest Knolls and Lagunitas, located to the west of the Project site. Sir Francis Drake Boulevard is the major road through the San Geronimo Valley, connecting to State Route 1 at Olema and US 101 at Larkspur.

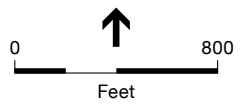
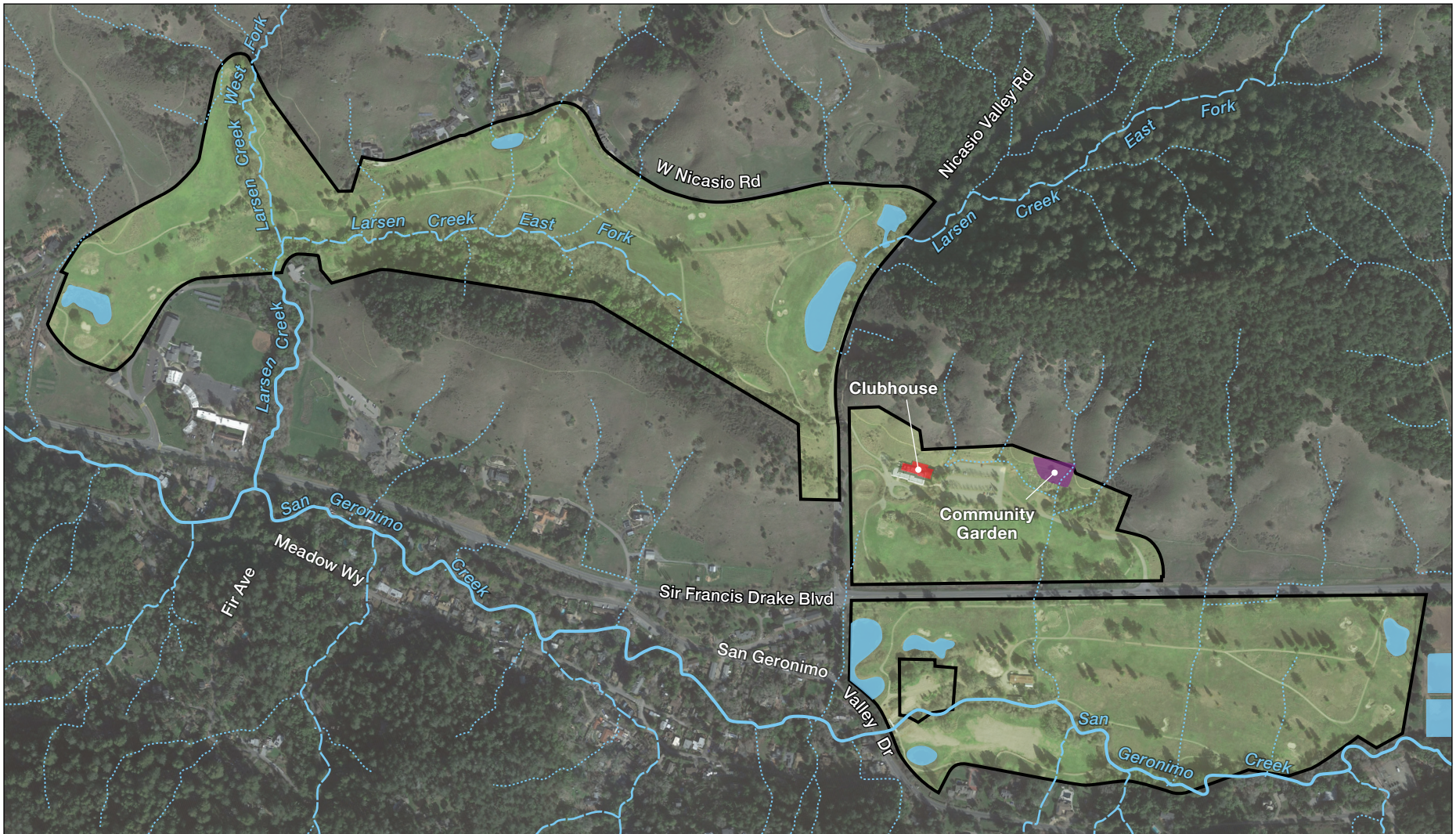
¹ CEQA is codified as Public Resources Code 21000–21189. The State CEQA *Guidelines*, the implementing regulations for CEQA, are contained in California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387.



SAN GERONIMO FIRE STATION INITIAL STUDY

Source: MarinMap; USGS - National Hydrography Dataset, 2023

Figure 1
Project Site



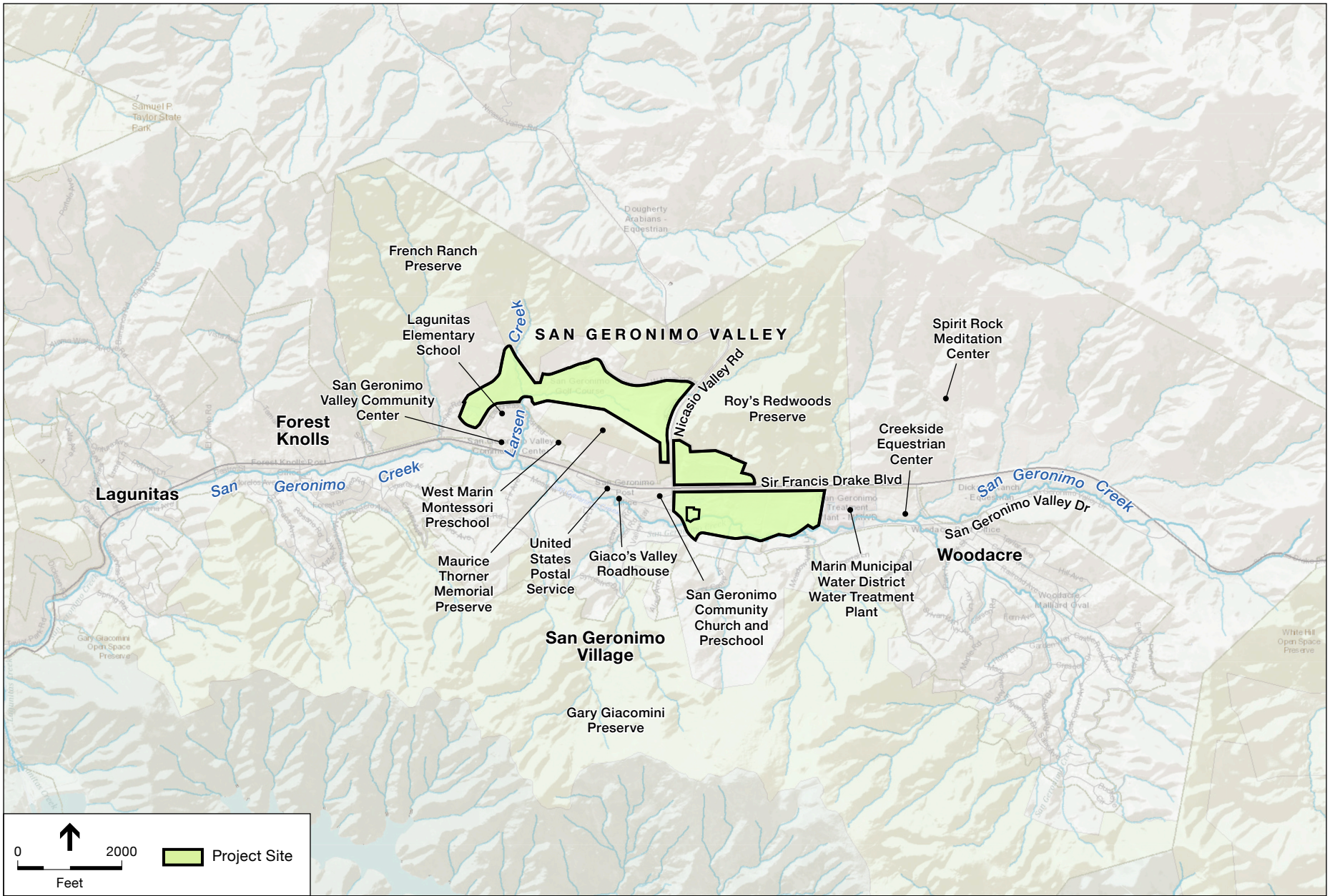
- Project Site
- Perennial Streams (NHD)
- Intermittent Streams (NHD)
- Waterbodies (NHD)
- Ephemeral Streams (NHD)

SAN GERONIMO FIRE STATION INITIAL STUDY

Source: Google Earth Pro, 2021

Figure 2

Aerial Photo of Project Site



SAN GERONIMO FIRE STATION INITIAL STUDY

Figure 3

Source: MarinMap, 2023

Regional Location

The Project site slopes generally downward from north to south, with elevations from about 400 feet above mean sea level (msl) in the northern part of the Project site to around 300 feet msl along San Geronimo Creek. San Geronimo Creek, a perennial tributary to Lagunitas Creek, runs through the southern portion of the Project site. Larsen Creek, a perennial tributary to San Geronimo Creek, flows through the westernmost parcel, west of Nicasio Valley Road. Several other ephemeral streams drain the hillslopes to the north of the Project site, and flow through it toward San Geronimo Creek.

Surrounding land uses (Figure 3) include several open space areas administered by Marin County Parks: Roy's Redwoods Preserve, French Ranch Preserve, and Maurice Thorner Memorial Preserve all adjoin the northern parcels, north of Sir Francis Drake Boulevard, and Gary Giacomini Preserve is a short distance to the south. The San Geronimo Valley Community Center, Lagunitas Elementary School, and West Marin Montessori Preschool are located on the north side of Sir Francis Drake Boulevard to the west of Nicasio Valley Road, and San Geronimo Community Church and Preschool, Giaco's Valley Roadhouse, a diner, and a US Post Office are located along San Geronimo Valley Drive west of Nicasio Valley Road. East of the Project site to the south of Sir Francis Drake Boulevard is a Marin Municipal Water District water treatment plant and an equestrian center, and to the north the Spirit Rock Meditation Center. Single family residences are located along San Geronimo Valley Drive and southward into the hills, as well as along West Nicasio Road (a private road).

The four parcels making up the Project site (Figure 1) range in size from under two acres to over 80 acres, totaling 157.28 acres, with average slopes from 7.68 percent to over 15 percent² (Table 1). It is improved with landscape features and structures that previously supported an 18-hole golf course, including buildings in parcels 172-371-04 (the "Clubhouse Parcel") and 172-372-14. The approximately 16,000 square foot (sf), two-story clubhouse building (Figure 4), constructed in 1967, is currently being rented by MCFD for use as administrative offices and for other purposes. There are various accessory structures within the Project site, including a maintenance building, an equipment storage barn, a caretaker's cottage, and an ADA-compliant bathroom facility, all located on the southern parcel (parcel 172-371-04). The main parking lot for the former golf course is adjacent to the clubhouse building. A community garden is located just east of the parking lot. The parking lot is used by gardeners, and by the public as an informal trailhead for trails within the Clubhouse Parcel and into the adjacent Roy's Redwoods Preserve.

² Slope percentage is calculated as rise over run, where a 1:1 (rise to run) slope is 100%



Table 1: Parcel Information

APN	Acreage	Avg. Slope	Improvements	Other Features
172-371-04	21.83	14.46	clubhouse, parking lot, drainage facilities, paths, two access roads	ephemeral streams, community garden, informal trailhead, rock outcrops
168-250-41	78.45	15.48	paths, pond, water conveyance structures	Larsen Creek, water features
172-372-14	55.37	7.68	caretaker's cottage, maintenance building, equipment storage barn, restroom	San Geronimo Creek
172-372-01	1.63	15.73	access road	San Geronimo Creek

Source: MarinMap, 2023; Assessor's Parcel Maps

The Clubhouse Parcel, where the new fire station and headquarters are proposed, slopes downward from north to south, with steeper slopes toward the north, and flatter slopes in the south. Several ephemeral streams drain the hillslope to the north, flow onto the Project site, then are channeled into an existing drainage system. Another ephemeral stream runs roughly parallel to Nicasio Valley Road in the southwestern portion of the site. There are several rock outcrops on this parcel.

In addition to the clubhouse building, the Clubhouse Parcel includes three of the former fairways, located in the southern, flatter portion of the site; landscaped areas around the clubhouse; the golf course's parking lot and public access road from Sir Francis Drake Boulevard; a service road with access from Nicasio Valley Road; and golf cart trails. The trails connect to the other parcels via a tunnel beneath Sir Francis Drake Boulevard, and an overpass over Nicasio Valley Road.

The entire Project site, other than the clubhouse and other buildings, is open to the public for recreational use. TPL, in partnership with MOST and Trout Unlimited, is currently implementing a stream restoration project along San Geronimo Creek within the Project site to improve salmonid habitat. The stream restoration project is not a part of the proposed land purchase and MCFD facilities Project, but cumulative effects are considered in this Initial Study (see Section IV.21, Mandatory Findings of Significance). Additionally, the Marin County Water Conservation and Flood Control District is proposing to use a part of the Project site for offsite mitigation planting for the San Anselmo Flood Risk Reduction (SAFRR) project. The mitigation planting is the subject of a separate Addendum to the 2018 SAFRR Final EIR,³ but will also be considered as a cumulative project in this document.

Project Objectives

MCFD requires a new headquarters facility and fire station to meet current and future community emergency service demands. The current headquarters and fire station located in Woodacre are antiquated, undersized, and constantly in need of

³ The SAFRR EIR and Addendum are available at: <https://www.marincounty.org/depts/cd/divisions/environmental-planning/current-eir-projects/san-anselmo-flood-risk-reduction-project>.

repair. The entire facility and adjacent auxiliary structures are well beyond their normal useful life for an essential service facility.

The MCFD headquarters and fire station were established in Woodacre on an abandoned Northwestern Pacific Railroad right-of-way, with dispatch, shop, and sleeping quarters added over time. The main building and station in Woodacre were rebuilt in 1972 and over the years existing garage structures (circa 1940's) were converted for office and other uses. Upon reopening the main building in 1972, it was immediately obsolete, as the Department transitioned from a two-platoon staffing model to three, increasing personnel overnight by 30%. Currently, the Department's Fire Prevention Bureau is housed in a portable building and what is now the mechanic's shop originally contained the living quarters, machine shop, mechanic shop, and office.

County Fire Protection Services were the subject of a 2010 Vision Plan (Beverly Prior Architects, 2010). The purpose of this document was to provide policy makers with MCFD's long-term vision for their facilities. The planning tool was meant to help prioritize and inform future capital improvement decisions. The plan was performed collaboratively with MCFD and the Office of the County Administrator. The Project is based on the facility needs identified in the Vision Plan.

Most of the Project site is currently managed as open space, open to the public for passive recreation. Continuation of these uses for the benefit of the public, the community, and the environment is an additional objective of the Project.

Project Scope

The Project would provide new facilities to support several MCFD functions:

Emergency Response Services. The new fire station would replace most of the functions currently housed at the Woodacre Station, and would provide 911 Emergency response serving the Woodacre, Nicasio, Lucas Valley, Forest Knolls, Lagunitas and San Geronimo areas. MCFD also provides automatic aid to the communities of Fairfax and Oak Manor. In addition, MCFD, through a contract with the State fire agency, CAL FIRE, is responsible for protecting nearly 200,000 acres of State Responsibility Area (SRA), which includes the San Geronimo Valley and most of West Marin. The new station would provide wildland fire response to wildland areas in and around San Geronimo Valley. In addition to apparatus bays and apparatus support spaces, the new fire station would also provide offices and living quarters for full-time and seasonal fire fighters. The new station would be

built to essential service facility⁴ standards and would provide state-of-the-art facilities of adequate size. Relocating emergency response functions from the existing Woodacre facility to the Project site, which is located at the intersection of the two major roads in the San Geronimo Valley and outside of densely populated areas, would improve overall response times compared to the existing station.

Headquarters Administration. MCFD has 34 full-time and ten part-time employees who administer the activities of paramedics, full-time firefighters, seasonal firefighters, and special operations.⁵ They also perform prevention activities including plan review, inspections, and public education. MCFD's administrative functions include coordination with and providing services for CAL FIRE and the State Office of Emergency Service, and administering contracts for service, mutual aid, and auto aid with other agencies. The new facility, repurposed from the existing clubhouse building, would include administrative offices and workstations, training classrooms, and conference rooms. The number of employees working at the Headquarters facility may increase over time, and may include higher numbers of seasonal workers during fire season.

Training. Training facilities for firefighter recruits are proposed to include a fire training tower and outdoor and indoor classrooms.

Continued Use of the Woodacre Station

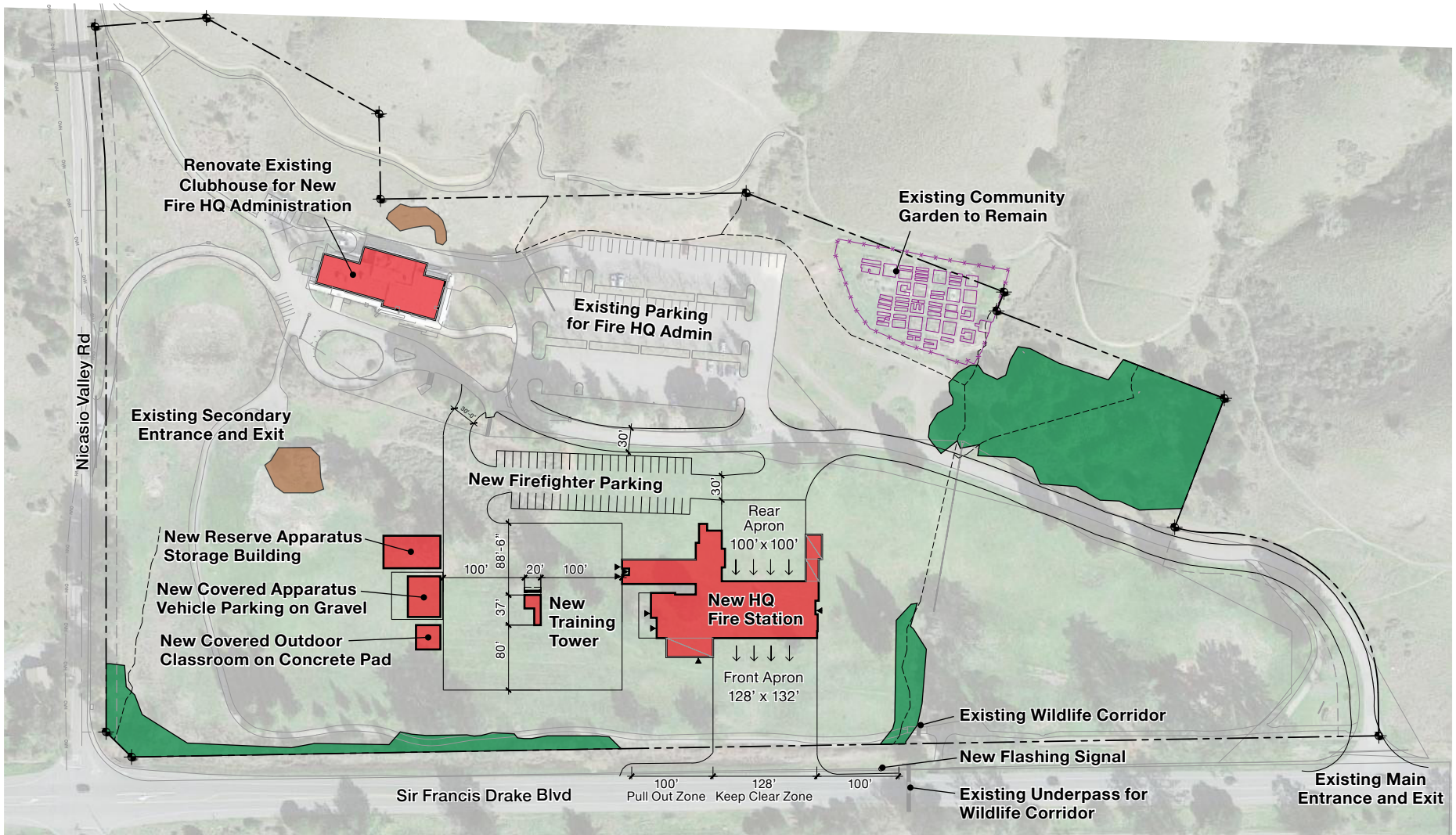
While the programs described above would move to the new facility, MCFD would continue to use the Woodacre site. The Woodacre site would no longer house emergency functions, but existing facilities would be used to store reserve equipment and engines. Furthermore, the existing Maintenance and Repair Shop would remain in use.

Site Plan and Architectural Program

The site plan for the proposed new and repurposed facilities (Ten Over Studio, 2023) is shown in Figure 5. The proposed location for the new fire station and training facilities is within the Clubhouse Parcel, to the south of the existing parking lot (Figure 6). This location is relatively flat, as it is an area previously used for golf course fairways.

⁴ In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be, "designed and constructed to minimize fire hazards and to resist...the forces generated by earthquakes, gravity, and winds." This enabling legislation can be found in the California Health and Safety Code, Chapter 2, sections 16000 through 16022. In addition, the California Building Code defines how the intent of the act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. "Essential Services Building" is defined to mean, "any building, or any building a portion of which is used or designed to be used as a fire station, police station, emergency operations center, California Highway Patrol office, sheriff's office or emergency communication dispatch center."

⁵ MCFD's special operations include Urban Search and Rescue (USAR), Swift Water Rescue, and Hazardous Material Response.



SAN GERONIMO FIRE STATION INITIAL STUDY

Source: Ten Over Studio, 2023

Figure 5

Site Plan



Architectural drawings of the proposed new buildings have not yet been prepared; detailed design will follow County purchase of the Project site, if the Project is approved. The County plans to engage the community in a design process, providing opportunity for public input to select a design that is compatible with the character of the San Geronimo Valley.

The architectural program for the new fire station building includes a 1-story structure occupying about 20,000 sf. It would house five double-deep, drive-through apparatus bays, each with 14-foot x 14-foot roll-up doors. The fire station building would also have a turnout gear room, equipment storage areas, firefighter workstations, Captains' office, Battalion Chief's office, firefighter living quarters with 33 beds, and utility rooms (Appendix C, Architectural Program). There would be paved rear and front aprons to allow for apparatus movement in and out of the bays (Ten Over Studio, 2023).

Ingress for fire trucks and other apparatus would be via the existing main driveway on Sir Francis Drake Boulevard. Trucks would depart the driveway at the existing parking lot and access the rear apron and apparatus bays across a new paved connector road. Egress from the station onto Sir Francis Drake Boulevard would be across the 128-foot-wide front apron (essentially a wide driveway; see Figure 5 in Section II.F, Project Description) and across a newly developed driveway. The driveway would cross an existing drainage ditch running parallel to Sir Francis Drake Boulevard. A "Keep Clear" zone would be established on the shoulder of Sir Francis Drake Boulevard, with a 100-foot-long pull-out zone to the west. A new, flashing signal light may be placed east of the driveway and activated upon exit of an emergency vehicle to warn approaching vehicles (Ten Over Studio, 2023).

Other new buildings proposed for the site include a new training tower (+- 500 sf, up to 45 feet tall), reserve apparatus storage building (2,800 sf), covered apparatus parking building, and a covered outdoor classroom (combined 2,900 sf) (Ten Over Studio, 2023). These are proposed to be placed close to and to the west of the new fire station. A new, approximately 45-space parking lot for firefighters would be located south of the existing parking lot (Figure 5). The new lot would occupy approximately one-half acre.

The existing clubhouse building would be repurposed as the administration building for MCFD. A new exterior stairway would be added, increasing the size of the building to 16,200 sf. The Project may involve other changes to the building, including, potentially, structural changes and changes to the exterior. The County's intent is to reuse the existing clubhouse building, but it may be replaced if reuse is found to be infeasible. Remodeling or replacement of the clubhouse building would be included in the aforementioned community design process.

Access and Parking

Access to all facilities would be via the existing main entrance and driveway on Sir Francis Drake Boulevard. Administrative staff and the public would use the existing parking lot, and firefighters would use the proposed new lot to the south.

Landscaping

The area of new landscaping around the proposed new facilities would cover approximately 25,000 sf. A landscaping plan has not yet been prepared, but plant species would be mostly or entirely native, and would be selected for drought tolerance and fire safety.

Utilities

The Clubhouse Parcel is currently served with public utilities that run to the clubhouse building, including water (Marin Municipal Water District), electricity, telephone, and internet service. There is an existing operating septic system on the Clubhouse Parcel. Utility lines would be extended to the new buildings. Some service lines may require upgrading. A new or upgraded septic system would be developed for the new fire station.⁶ Detailed requirements and plans for utilities have not been developed.

Stormwater Controls

A hydrology and drainage study was performed for the Project (BKF Engineers, 2023). The study recommended improvements to the existing drainage system within the Clubhouse Parcel to ensure that the 100-year peak stormwater flow after construction of the proposed new fire station facilities is at or below pre-Project levels, and that water quality is not adversely affected. Proposed improvements to the drainage system are shown in Figure 7 and include the development of two stormwater bioretention basins to which site drainage would be routed. The bioretention basins would overflow to existing drainage channels that eventually flow into San Geronimo Creek.

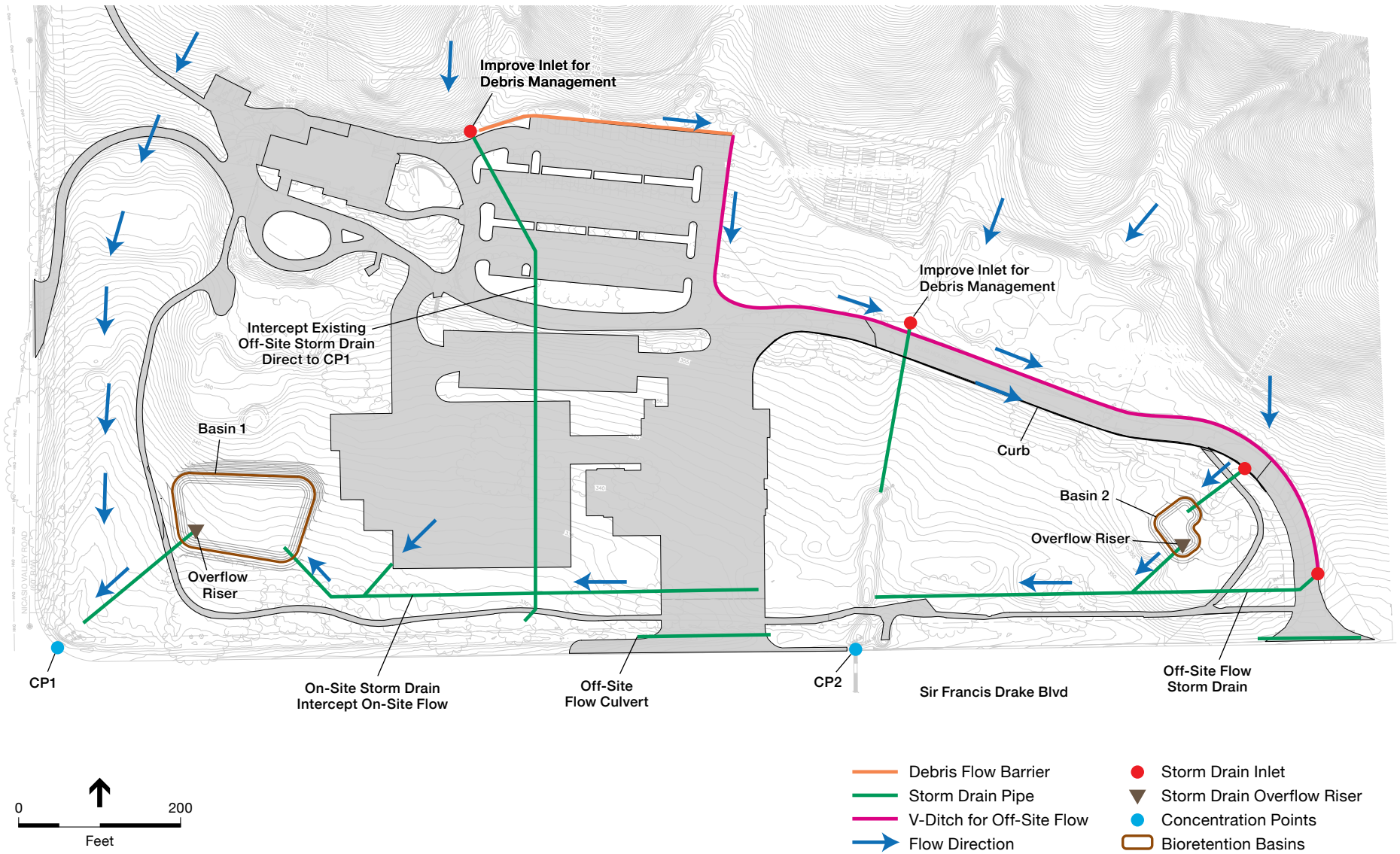
Foundations and Grading

A geotechnical study report was completed for the Project (RGH Consultants, 2023). The study found that known geologic hazards located within the Clubhouse Parcel could be addressed with geotechnical and structural engineering, and concluded that site development as proposed by the Project is feasible from a geologic perspective. The study stated that this conclusion is preliminary, and recommended a detailed, design-level geotechnical study that includes subsurface exploration, laboratory testing, and geotechnical engineering evaluation.

Site Preparation and Construction Schedule

Construction of the proposed new fire station and training facilities would begin in the spring or summer of 2025. Construction would be completed in 18-24 months. Site preparation would include clearing and grading. Grading volumes are preliminarily estimated to be 6,100 cubic yards (CY) of cut and 12,700 cy of fill. An estimated 1,500 cy of cut material would not be suitable for use as fill and would be exported, resulting in the need to import 8,100 cy of material for fill. Site development would include approximately 2.3 acres of paved area outside of building footprints and parking areas. Total disturbed area would be about 3.7 acres.

⁶ The County has contracted with Adobe Associates, Inc., a civil engineering firm, to assess the condition of the existing septic system and, if necessary, to design a new or upgraded system.



SAN GERONIMO FIRE STATION INITIAL STUDY

Source: BKF Engineers, 2023

Figure 7
Drainage Plan

Protection for Sensitive Resources

The site plan was developed with the express intent of avoiding sensitive resources.⁷ The Clubhouse Parcel contains several ephemeral channels and associated riparian vegetation. It also contains scenic rock outcrops and areas of geologic instability. The site plan would avoid disturbance of identified sensitive areas and features, and would concentrate new development within previously disturbed areas that were until recently used as fairways for the golf course.

Other Existing Buildings

The Project includes no plans for the four existing buildings on the southern parcel within the Project site. It is reasonably foreseeable, however, that one or more of these buildings, currently in poor condition, would be altered or demolished.

Restrictions on Future Uses

The existing Conservation Easement, which was granted by TPL to MOST (Trust for Public Land and Marin Open Space Trust, 2022), covers the entire former golf course property, except the Clubhouse parcel. The Conservation Easement is a legally enforceable deed restriction that governs land use. The purpose of the Conservation Easement is, “to preserve, enhance, restore and protect forever the Conservation Values of the Property.” The Conservation Values are described in the Conservation Easement in detail, and summarized as follows: “The Property possesses numerous natural physical conditions and features of conservation value, including ecological, scientific, watershed, natural water flow, water quality, aquatic, salmonid and riparian habitat, wildlife habitat and wildlife migration corridors, nature experience and education, open space, viewshed, fire resilience and safety and compatible public recreation values... that are of great importance to Grantor [TPL], Grantee [MOST], and the people of the State of California, provide a significant public benefit, and are worthy of conservation.

The Conservation Easement references a community engagement and planning process that resulted in the creation of a “Restoration and Reuse Vision Framework” that will guide future use and restoration activities on the Property. The Restoration and Reuse Vision Framework was developed in partnership with Trout Unlimited, and provides for restoration of riparian areas along San Geronimo and Larsen Creeks, enhanced stream flows and improved water quality in the creeks, improved floodplain and ecosystem processes, upland wildlife habitat connectivity and linkages, public access, wildlife- and conservation-compatible recreational activities, and fire safety measures (Trust for Public Land and Trout Unlimited, 2022).

The Conservation Easement establishes legally enforceable restrictions for future use of the Project site other than the Clubhouse Parcel. The Conservation Easement states that, “any activity on or use of the Property is prohibited if it is, or is reasonably likely to become, inconsistent with the Conservation Purpose of this

⁷ In 2021, Sicular Environmental Consulting and Natural Lands Management completed an environmental constraints analysis for the County. That study examined environmental sensitivities of the Clubhouse Parcel, and identified those portions of the parcel with the lowest sensitivity, recommending those areas for future development (Sicular Environmental Consulting, 2021).

Conservation Easement.” Uses that are specifically prohibited are detailed in the Conservation Easement, and include the following (most restrictions recited below have expressly stated exceptions):

- Golf and other uses that require irrigation and/or removal or frequent manipulation of significant areas of natural habitat, except for expressly permitted uses such as recreational trails;
- The use or diversion of water from San Geronimo or Larsen Creeks or their tributaries for any purpose, and the use of municipal water for non-native landscaping;
- The use or application of fertilizers, pesticides, biocides, herbicides or other agricultural chemicals except to the minimum extent required to protect or restore the Conservation Values;
- The use of any motorized vehicles on or off trails and roads, and the use of motorized drones or similar devices;
- The removal or conversion of native habitat, except as expressly provided in management and restoration plans;
- Agricultural activities of any kind including cultivation and irrigation of crops of any kind, raising, grazing and managing livestock, and other agricultural activities for commercial or recreational purposes;
- Fishing in streams;
- Recreational hunting;
- Residential, commercial, and industrial uses;
- New structures, roads, or facilities
- Recreational facilities which require or result in removal of natural habitat, manipulation of natural topography, impacts to wildlife connectivity, irrigation and/or other intensive land or water uses;
- Any legal or de facto division, subdivision or partitioning of the property;
- Sale or transfer of development rights between parcels or to the benefit of any other property;
- New infrastructure that would support a use or development off of the property;
- Commercial power generation, including solar and wind farms; wires, lines, pipes, cables, solar panels, wind-generation facilities, or other alternative energy systems;
- Mining;
- Installation of lighting with the potential to impact wildlife, night sky viewing, natural habitat conditions and the enjoyment of the property and neighboring properties.

While the Conservation Easement does not apply to the Clubhouse Parcel, the Option Agreement between TPL and the County includes Exhibit C, Deed

Restrictions to the Clubhouse Parcel (Trust for Public Land and Marin County, 2022). Exhibit C includes several deed restrictions that the County has agreed to record, if the purchase of the Project site proceeds. These deed restrictions would be legally enforceable limitations on the County's future use of the Clubhouse Parcel. They include the following:

- (a) No golfing activities or golf-course-related uses are allowed, including installation or maintenance of greens, fairways, tees, traps, roughs, or other land-use features that would facilitate golfing or golf course uses.
- (b) No wastewater treatment, wastewater storage or wastewater recycling facilities are allowed; however, such facilities may be allowed onsite to the extent minimally required to serve permitted land uses on the Subject Property.
- (c) No agricultural cultivation or related uses are allowed; provided, however, that a total of up to two (2) acres of community gardens, native plant harvest gardens, pollinator gardens, as well as indigenous ceremonial spaces, is allowed.
- (d) Allowed uses are limited to the following: (i) new Marin County fire facilities, (ii) other nonresidential public facilities serving County administrative or public serving uses, (iii) visitor-serving commercial or recreational uses that are compatible with adjacent residential neighborhoods and the unique open space character of the San Geronimo Valley, and (iv) the restoration, management and passive enjoyment of natural open space and wildlife habitat.

Public facilities allowed under this section may include residential accommodations only for emergency and related support services, and property management personnel including park and open space management personnel.

In addition, any development allowed under this section shall include public trail(s) access and a trailhead(s) linking the Subject Property's adjacent open space parcels and preservation of an existing wildlife corridor linking public land to the north and south of the Subject Property in a location to be determined in the future.

REQUIRED APPROVALS

The Project would require several approvals:

- Compliance with CEQA through adoption of a Mitigated Negative Declaration or a Negative Declaration, or certification of an Environmental Impact Report by the Marin County Board of Supervisors.
- An action by the Marin County Board of Supervisors to approve purchase of the former golf course property and development of the new MCFD fire station and headquarters facilities.

- Construction of the new fire station facilities and reconstruction of the clubhouse building would require building permits issued by Marin County Community Development Agency.
- Future alteration or demolition of any of the existing structures on the southern parcel, if this were to occur, would require a building or demolition permit issued by the Marin County Community Development Agency.
- The Project may require permits from other agencies, as well, such as a Streambed Alteration Agreement, issued pursuant to California Fish and Game Code 1600 by the California Department of Fish and Wildlife.

APPLICABILITY OF COUNTY REGULATIONS

Marin County Development Code Sec.22.06.050(B) states that, “Official activities and development of the County... on land owned or leased by a governmental agency are exempt from discretionary permits except Coastal Permits.” Because construction of a new fire station would be a County project, and the Project site would be owned by the County, this Development Code section applies to the Project. Therefore, the Project would not require a Land Use Permit or other discretionary permit issued by the County; neither would the Project be subject to the General Property Development and Use Standards contained in Development Code Chapter 22.20. Per Development Code Sec. 22.06.0560(J), however, other County permits may still be required, including Building Permits, Grading Permits, or other construction permits; and the Project would also be subject to any permits required by a regional, State, or federal agency.

REFERENCES

- Beverly Prior Architects, 2010. County of Marin Fire Facilities Vision Plan. Prepared in collaboration with: County of Marin Administrator’s Office, County of Marin Fire Department, County of Marin Public Works Department. October 4, 2010.
- BKF Engineers, 2023. San Geronimo Valley – Fire Headquarters: Draft Drainage Study. Prepared for County of Marin. August 7, 2023.
- Marin County, 2021. Marin County Code, Title 22, Development Code.
- RGH Consultants, 2023. Draft Geotechnical Study Report, San Geronimo Golf Course Clubhouse Parcel, APN: 172-371-04, 5800 Sir Francis Drake Boulevard, San Geronimo, California. Prepared for County of Marin. August 4, 2023.
- Sicular Environmental Consulting and Natural Lands Management, 2021. San Geronimo Golf Course Clubhouse Parcel: Environmental Constraints Analysis. Prepared for Marin County Fire Department, October 2021.
- Ten Over Studio, 2023. County of Marin Fire Department HQ Relocation Feasibility Study, 5800 Sir Francis Drake Blvd, San Geronimo, CA 94963. Prepared for Marin County Fire Department. Draft, June 2023.

Trust for Public Land (Optioner) and Marin County (Optionee), 2022. Option Agreement. December 12, 2022.

Trust for Public Land (Grantor) and Marin Open Space Trust (Grantee), 2022. Conservation Easement, San Geronimo Valley River Parkway Project, APN 168-250-41, 172-372-14, and 172-372-01. Recorded June 28, 2022.

Trust for Public Land and Trout Unlimited, Inc., 2022. Restoration Agreement, San Geronimo Commons Property. Effective Date: February 1, 2022.

III. CIRCULATION AND REVIEW

This Initial Study/Mitigated Negative Declaration is being circulated for a [20 or 30]-day review and comment period pursuant to State CEQA *Guidelines* Section 15073. It is being circulated to all agencies that have jurisdiction over the subject property or the natural resources affected by the project and to consultants, community groups, and interested parties to attest to the completeness and adequacy of the information contained in the Initial Study as it relates to the concerns which are germane to the agency's or organization's jurisdictional authority or to the interested parties' issues.

Marin County Agencies:

- Marin County Department of Public Works (DPW)
- Marin County Community Development Agency, Environmental Health Services Division
- Marin County Fire Department
- Marin County Parks Department
- Marin County Open Space District

Trustee and Responsible Agencies:

- National Marine Fisheries Services
- US Department of Fish and Wildlife
- US Army Corp of Engineers
- California Department of Fish and Wildlife
- California Regional Water Quality Control Board

IV. EVALUATION OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Pursuant to Section 15063 of the State CEQA *Guidelines*, and the County EIR Guidelines, Marin County will prepare an Initial Study for all projects not categorically exempt from the requirements of CEQA. The Initial Study evaluation is a preliminary analysis of a project which provides the County with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration. The points enumerated below describe the primary

procedural steps undertaken by the County in completing an Initial Study checklist evaluation and, in particular, the manner in which significant environmental effects of the project are made and recorded.

- A.** The determination of significant environmental effect is to be based on substantial evidence contained in the administrative record and the County's environmental data base consisting of factual information regarding environmental resources and environmental goals and policies relevant to Marin County. As a procedural device for reducing the size of the Initial Study document, relevant information sources cited and discussed in topical sections of the checklist evaluation are incorporated by reference into the checklist (e.g., general plans, zoning ordinances). Each of these information sources has been assigned a number which is shown in parenthesis following each topical question and which corresponds to a number on the database source list provided herein as Attachment 1. See the sample question below. Other sources used or individuals contacted may also be cited in the discussion of topical issues where appropriate.
- B.** In general, a Negative Declaration shall be prepared for a project subject to CEQA when either the Initial Study demonstrates that there is no substantial evidence that the project may have one or more significant effects on the environment. A Negative Declaration shall also be prepared if the Initial Study identifies potentially significant effects, but revisions to the project made by or agreed to by the applicant prior to release of the Negative Declaration for public review would avoid or reduce such effects to a level of less than significance, and there is no substantial evidence before the Lead County Department that the project as revised will have a significant effect on the environment. A signature block is provided in Section VII of this Initial Study to verify that the project sponsor has agreed to incorporate mitigation measures into the project in conformance with this requirement.
- C.** All answers to the topical questions must take into account the whole of the action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Significant unavoidable cumulative impacts shall be identified in Section V of this Initial Study (Mandatory Findings of Significance).
- D.** A brief explanation shall be given for all answers except "Not Applicable" answers that are adequately supported by the information sources the Lead County Department cites in the parenthesis following each question. A "Not Applicable" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "Not Applicable" answer shall be discussed where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- E.** "Less Than Significant Impact" is appropriate if an effect is found to be less than significant based on the project as proposed and without the incorporation of mitigation measures recommended in the Initial Study.

- F.** "Potentially Significant Unless Mitigated" applies where the incorporation of recommended mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead County Department must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section IV, "Earlier Analyses", may be cross-referenced).
- G.** "Significant Impact" is appropriate if an effect is significant or potentially significant, or if the Lead County Department lacks information to make a finding that the effect is less than significant. If there are one or more effects which have been determined to be significant and unavoidable, an EIR shall be required for the project.
- H.** The answers in this checklist have also considered the current State California Environmental Quality Act Guidelines and Appendix G contained in those Guidelines.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “potentially significant impact” as indicated by the checklist on the following pages.

- | | |
|---|---|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Biological Resources |
| <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Greenhouse Gas Emissions |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population and Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Mandatory Findings of Significance | |

Environmental Impact Checklist

1. Aesthetics

<i>Except as provided in Public Resources Code Section 21099, would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) **Would the Project have a substantial adverse effect on a scenic vista?**

c) **Would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

Setting

Scenic vistas are unobstructed views of valued viewsheds from particular locations or vantage points. Topics a and c, discussed here together, consider, on the one hand, whether the Project would block or otherwise have a substantially adverse effect on scenic vistas from vantage points within the Project site (topic a), and on the other hand, whether the Project would substantially degrade (including partially or wholly blocking) scenic views of the Project site itself or across the Project site to scenic features beyond. In both cases, the analysis is restricted to potentially adverse effects on views from publicly accessible vantage points.

Scenic resources within the Project site include its largely undeveloped, open space character, mature landscape trees, riparian forest and streams, grasslands, ponds, and rock outcrops (Figure IV.1-1). While largely devoid of built features, the open areas of the Project site have been substantially altered in the past, most recently by the development and use of the Project site as a golf course over a period of more than 50 years. Since the Trust for Public Land (TPL) acquired the Project site, golf course landscaping has not been irrigated or maintained, and much of it, particularly former fairways, but also landscaping around the Clubhouse, has reverted to ruderal vegetation (see Section IV. 4, Biological Resources). Portions of San Geronimo Creek that have recently been restored have not fully developed riparian vegetation, and still retain an intentionally landscaped character. Overall, while the open space character of the Project site is aesthetically pleasing, it does not retain the outstanding visual character of a natural landscape.

Most of the built features within the Project site are not outstanding or important scenic resources. The former clubhouse building, constructed in the 1960s, is architecturally undistinguished (Figure 4 in Section II.F, Project Description). The maintenance building and equipment storage barn in the southern portion of the project site have little aesthetic merit, and the caretaker's cottage, which perhaps was once a handsome little house, is in a badly deteriorated condition. These buildings are currently surrounded by a chain-link fence (Figure IV.1-2). Pathways throughout the Project site, which are the former golf cart paths, are not visually prominent, other than the bridge over Nicasio Valley Road. The bridge is an arched wooden structure set on concrete piers and is visually distinctive and prominent when approached from both directions on Nicasio Valley Road (Figure IV.1-3).

Views of the Project site from publicly accessible vantage points not within the former golf course property include views from Sir Francis Drake Boulevard east of Nicasio Valley Road looking both north (Figure IV.1-4) and south (Figure IV.1-5); from Nicasio Valley Road north of Sir Francis Drake Boulevard looking east (Figure IV.1-6) and west (Figure IV.1-7); from Nicasio Valley Road south of Sir Francis Drake Boulevard looking east toward the ponds (Figure IV.1-8), from San Geronimo Valley Drive, which has views of San Geronimo Creek within the Project site (Figure IV.1-9) and views across the former southernmost fairway and toward the proposed development area for the new fire station (Figure IV.1-10); and views of the westernmost parcel from Lagunitas School Road (Figure IV.1-11). Views along these roads where they front on the Project site are obscured or limited by vegetation and topography, but motorists, bicyclists, and pedestrians (none of these roads has formal pedestrian facilities) travelling along them have momentary or occasional views of the former fairway areas set against the backdrop of naturally vegetated open space areas. There are also views across the Clubhouse Parcel from a trail within Roy's Redwoods Preserve just north of the Project site (Figure IV.1-12), and of and across the westernmost parcel from the French Ranch Fire Road.



Figure IV.1-1: Rock Outcrop



Figure IV.1-2: Caretaker's Cottage



Figure IV.1-3: Bridge over Nicasio Valley Road



Figure IV.1-4: View from Sir Francis Drake Boulevard East of Nicasio Valley Road, Looking North



Figure IV.1-5: View from Sir Francis Drake Boulevard East of Nicasio Valley Road, Looking South



Figure IV.1-6: View from Nicasio Valley Road North of Sir Francis Drake Boulevard, Looking East



Figure IV.1-7: View from Nicasio Valley Road North of Sir Francis Drake Boulevard, Looking West



Figure IV.1-8: View from Nicasio Valley Road South of Sir Francis Drake Boulevard, Looking East



Figure IV.1-9: View from San Geronimo Valley Drive toward San Geronimo Creek



Figure IV.1-10: View from San Geronimo Valley Drive across the Former Southernmost Fairway



Figure IV.1-11: View of the Westernmost Parcel from Lagunitas School Road



Figure IV.1-12: View across the Clubhouse Parcel from the Trail within Roy's Redwoods Preserve

Publicly accessible views from within the Project site include views from the community garden (Figure IV.1-12), from the parking lot within the Clubhouse Parcel (Figure 6 in Section II.F, Project Description), and from the former golfcart paths, which are currently used as walking trails throughout the Project site. Scenic vistas from within the Project site include the view south and southeast from the top of the rock near the former clubhouse (Figure IV.1-13), and the view west from the bridge over Nicasio Valley Road (Figure IV.1-14). These scenic vistas feature unremarkable but open fields within the Project site, set against the naturally vegetated hills surrounding San Geronimo Valley.

In sum, visual resources within the Project site are limited to the rock outcrop south of the former clubhouse building (Figure IV.1-1), and the relatively natural areas with scenic backdrops, especially portions of San Geronimo Creek with mature riparian vegetation, and the westernmost parcel (Figure IV.1-14). Scenic vistas that include the Project site include the view from the top of the rock outcrop (Figure IV.1-3) and from the bridge over Nicasio Valley Road (Figure IV.1-14). While there are several scenic vistas from adjacent areas, these are diminished in importance because they are partially obscured or can be viewed only briefly from passing vehicles.

Regulatory Setting

The Marin Countywide Plan (CWP) primarily provides for the protection of scenic resources through the use of the Ridge and Upland Greenbelt (RUG) designation. The Project site is not designated RUG. **Figure IV.1-15** shows designated RUG areas in proximity to the Project site. The closest RUG areas are to the east, east of the ridgeline separating the Lagunitas Creek watershed from the Corte Madera Creek watershed.

The 1997 San Geronimo Valley Community Plan (SGVCP) also discusses scenic resources and their protection: “The predominant natural resource values in the community include biotic resources, including vegetation and wildlife habitats; the stream system, which provides both functional (drainage and flood control) and aesthetic benefits; and scenic resources created by natural amenities such as hillside topography, and significant vegetation.” The SGVCP includes **Objective ER-1.0: to maintain and enhance the natural environment by protecting scenic hillsides, ridges, vistas and entryways into the Valley and preserving and enhancing air and water quality.**

Several policies support achievement of Objective ER-1.0:

SGVCP Policy ER-1.2: Protection of Natural Resources. Areas where significant natural resources and features are identified shall be protected through appropriate land use policies and regulations. These resources include but are not limited to: wildlife habitat, vegetative cover, prominent open view areas and viewsheds, ridgelines, wetlands, watershed areas and creek zones, rock outcroppings, trails and open space.

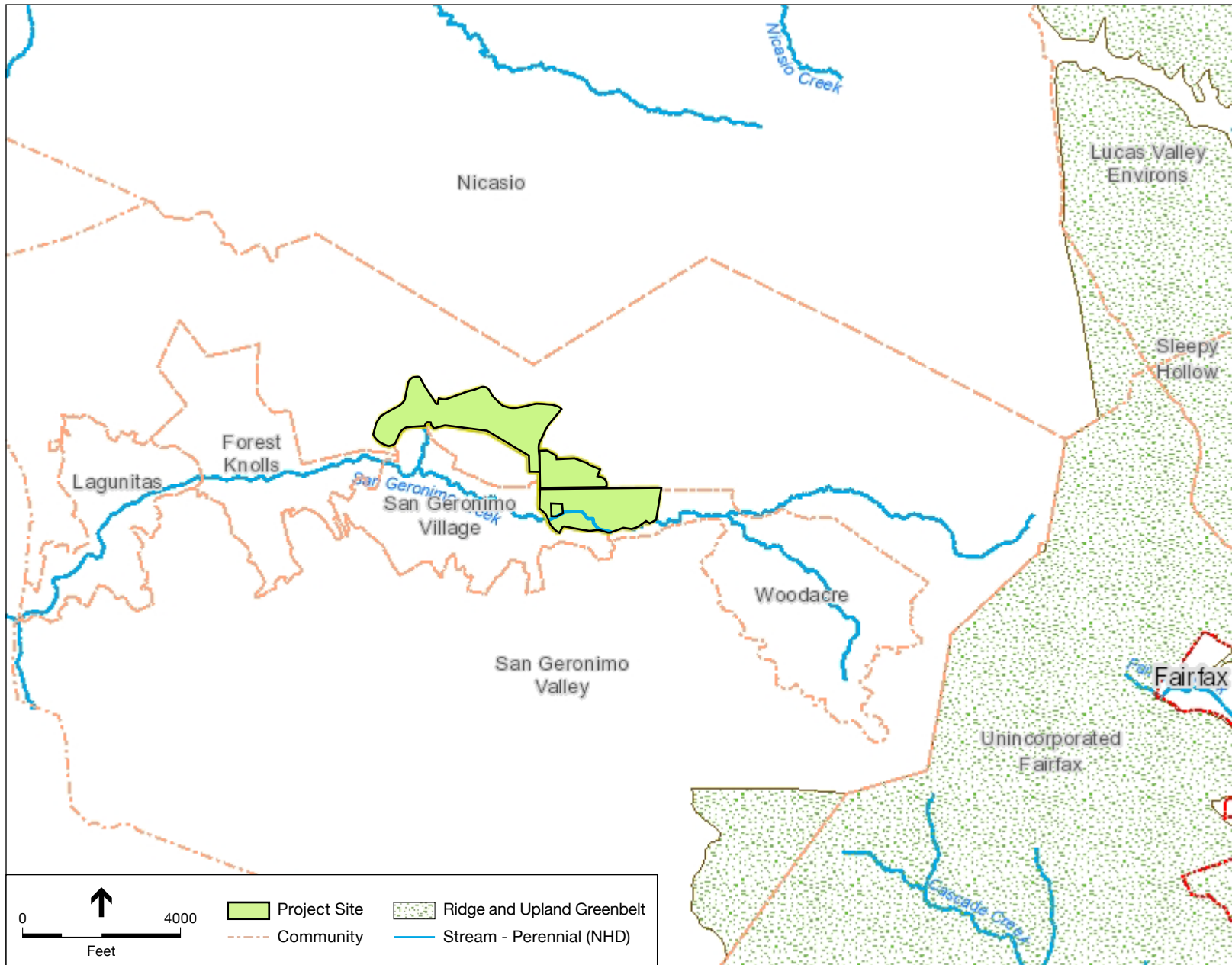
SGVCP Policy ER-1.3 Protection of Ridgelines. Ridgelines, including flat grassy meadows on the top of ridges, shall be protected and development shall be consistent with the Design Criteria set forth in the Countywide Plan....



Figure IV.1-13: View Southeast from the Top of the Rock near the Former Clubhouse



Figure IV.1-14: View West from the Bridge over Nicasio Valley Road



SGVCP Policy ER-1.7 Use of Native Plant Landscaping. Encourage the use of native plants to preserve the rural character of the Valley and to support wildlife needs. Landscaping which changes the historical character of viewsheds and open space is discouraged.

The SGVCP also includes **Objective ER-2.0: to protect San Geronimo Valley Creek and its major tributaries as a scenic asset and viable wildlife and aquatic habitat.** **Objective ER-2.0** is supported by the following policy:

SGVCP Policy ER-2.1 Protect Creekside Environment. The County should continue to protect the creekside environment by implementation of the Streamside Conservation Policies...in the... Countywide Plan.⁸

Impact Discussion

The Project site is not located along a ridgeline and is not within a RUG area identified in the Countywide Plan. Neither would the Project obstruct public views of RUG areas or other scenic vistas of ridgelines. Therefore, the Project would not adversely affect scenic vistas that include any designated RUG areas.

The Project would maintain the majority of the Project site, other than the Clubhouse Parcel, in its current condition as open space. Some areas of the Project site, particularly riparian areas, are being restored to native vegetation, per the requirements and restrictions of the Conservation Easement and Restoration and Reuse Vision Framework (see discussion of Restricted Uses in Section II.F., Project Description). Given the intended and deed-restricted uses on these areas of the Project site, the Project would not result in any adverse effect on scenic resources within these areas of the Project site, and would not result in any adverse effect on scenic vistas that include these areas.

Development of the fire station facilities within the Clubhouse Parcel would not impact the rock outcrop, the most important scenic resource within that portion of the Project site: new facilities would be set back about 100 feet from the rock outcrop, and existing trees in-between would be maintained.

The scenic vistas identified above, that is, the view from the top of the rock outcrop, and the view from the bridge over Nicasio Valley Road, would not be substantially affected by proposed development: the proposed development area is not visible from the bridge, and it is partly obscured by vegetation in the view from the rock. To the extent that new structures would be visible, they would be a minor change from the current unobstructed view. New fire station buildings would not obstruct views of the most important visual resources, including the forested hills to the south and the areas of mature riparian forest along San Geronimo Creek. Views from the parking lot, the community garden, and the hiking trail just north of the Project site would be altered to include the new fire station buildings and associated hardscaped areas. New development would, however, be at a

⁸ The SGV Community plan predates the current version of the Countywide Plan. References to Countywide Plan policies that have been superseded are not included.

lower elevation than these publicly accessible vantage points, and would be partially obscured by existing mature landscape vegetation, including conifers planted along the main access road and in the parking lot. New development would therefore not substantially obscure the more important visual elements of these vistas.

The existing views of the development area from Sir Francis Drake Boulevard would be substantially altered, but these views are mostly obscured by vegetation, and visible only for a short time while travelling along the roadway (the speed limit on this section of Sir Francis Drake Boulevard is 50 mph). Furthermore, the proposed new buildings, other than the training tower, would be 1-story, and would be setback from the roadway about 130 feet (Figure 5 in Section II.F, Project Description). The new structures therefore would not block views of the open grasslands and wooded hillslopes to the north within Roy's Redwoods Preserve. As discussed in Section II.F, Project Description, the County plans to engage the community in the process of designing the fire station buildings, providing opportunity for public input to select a design that is compatible with the character of the San Geronimo Valley.

For these reasons, the proposed new fire station would not have a substantial adverse effect on a scenic vista and would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Impacts of these kinds would be less than significant.

b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated State scenic highways within the San Geronimo Valley (CalTrans, 2019). There would therefore be no impact of this kind.

d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

New sources of light and glare can occur from lighting associated with buildings and from exterior light sources such as street lighting, building illumination, security lighting, and landscape lighting. Glare is the effect created by the reflection of sunlight or artificial light from highly polished surfaces, such as window or automobile glass during the daytime. During nighttime, glare is usually the result of the viewer being within the line-of-sight of a bright source of light, such as from a building or vehicle headlamps, which contrast with surrounding low-ambient light conditions. Light pollution is an unwanted consequence of outdoor lighting and includes such effects as sky glow, glare, and light trespass. Light trespass is light cast where it is not wanted or needed, such as light from a streetlight or a floodlight that illuminates a neighbor's bedroom at night making it difficult to sleep.

As an emergency response facility, the new fire station would be staffed and operated 24 hours per day. External lighting could cause a substantial new light source in an area with little artificial outdoor lighting. Furthermore, architectural glass, some exterior

surface finishes, and hardscape areas can be highly reflective and capable of creating a substantial source of glare. Since the new fire station facilities would be located north of Sir Francis Drake Boulevard, the southern exposure of the new buildings could reflect back onto passing motorists and bicyclists, as well as people using paths within the Project site to the south.

Projects in Marin County must demonstrate compliance with Marin County's Green Building Code standards for reduction of light pollution: lighting must be designed and installed to comply with the minimum requirements in the California Energy Code, including maximum backlight, uplight, and glare (BUG) ratings shown in CALGreen Table 5.106.8. With adherence to these requirements, the Project can be expected to result in a less-than-significant impact with respect to nighttime light pollution.

As stated in Section II.F, Project Description, the County plans to engage the community in the design process for the new fire station facilities, providing opportunity for public input to select a design that is compatible with the character of the San Geronimo Valley. Evaluation of the potential for a structure to generate substantial daytime glare, however, requires architectural expertise that may not be available as part of the public review process. Therefore, there is the potential that a design could be approved for the new fire station facilities that would create a new source of substantial glare that would adversely affect daytime views in the area. This would be a potentially significant impact.

Adherence to CALGreen requirements for planting of shade trees in surface parking areas, landscape areas, and hardscape areas (CALGreen Section 5.106.12) would eventually reduce glare as planted trees mature, but planting of trees directly in front of the fire station would be limited by the need to retain an open area for emergency response operations. Mitigation Measure AESTHETICS-1 adds a requirement for review of Project architectural plans and adjustments to those plans to ensure that the new buildings do not create a substantial new source of glare. Implementation of Mitigation Measure Aesthetics-1 would reduce this impact to less than significant.

Mitigation Measure AESTHETICS-1: Design to Reduce Glare

Prior to approval of architectural plans for the new fire station facilities, the County will direct the Project architect to evaluate the proposed design to determine whether buildings and surfaces could cause a substantial new source of daytime glare. The architect will review the plans and make adjustments as necessary to reduce the potential for creation of a substantial new source of glare that could adversely affect daytime views. Design features to reduce glare may include, but are not limited to, the following: use of low-reflectivity glass coatings, roofing, and surface finishes; use of roof eaves and articulated facades; landscape vegetation, including trees, to increase shading and break-up lines of site to flat surfaces; avoiding use of large areas of glass and other reflective surfaces. Planting of shade trees will comply with the requirements of California Title 24 (CALGreen) Section 5.106.12, Shade Trees, for surface parking areas, landscape areas, and hardscape areas, except where shade tree planting would interfere with

emergency response operations. Recommendations will be incorporated into the final design of the fire station facilities.

Mitigation Monitoring Measure AESTHETICS-1

The Marin County Fire Department (MCFD) will task the Project architect with designing the Project to avoid glare impacts. MCFD will be responsible for incorporating recommendations into the final design of the new facilities.

References

California Department of Transportation (Caltrans), 2019. List of eligible and officially designated State Scenic Highways. Excel file, dated August 2019, and downloaded from Caltrans website September 6, 2023). Available at <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>

Marin County, 1997. San Geronimo Valley Community Plan. Adopted by the Marin County Board of Supervisors on December 2, 1997.

Marin County, 2007. Marin Countywide Plan. Prepared by the Marin County Community Development Agency and adopted by the Board of Supervisors, November 6, 2007.

2. Agriculture and Forestry Resources

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Project site is not shown as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the most recent version of the California Department of Conservation, Farmland Mapping and Monitoring Program's Important Farmland Map for Marin County (California Department of Conservation, 2022). That map shows nearly the entire site, including the entire area where the new fire station facilities would be developed, as "Urban and Built-up Land." The Project site is not zoned for agricultural use and is not under a Williamson Act contract. Therefore, there would be no impact of these kinds.

- c) **Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**
- d) **Would the Project result in the loss of forest land or conversion of forest land to non-forest use?**

The Project site is not zoned as forest land, timberland, or Timberland Production. Other than riparian forest areas, which would not be disturbed by the Project, the Project site does not contain forests. Therefore, there would be no impact of these kinds.

- e) **Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

The Project site is not Farmland and is not used for agriculture, other than the community garden within the Clubhouse Parcel. The Project would not affect the community garden. Most of the land around the Project site is protected open space or residential. The Project would not involve changes to the existing environment that could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. There would be no impact of this kind.

References

California Department of Conservation, Farmland Mapping and Monitoring Program, 2022. Marin County Important Farmland 2018.

Marin County, 2023. MarinMap, Agricultural Contract Parcels. <http://www.marinmap.org>
Accessed September 28, 2023.

3. Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The Project site is within the San Francisco Bay Area (Bay Area) Air Basin. Air quality in the Bay Area Air Basin is governed by the Bay Area Air Quality Air Management District (BAAQMD). The BAAQMD has developed air quality plans to attain and maintain air quality standards within designated timeframes. The BAAQMD air quality plans estimate future emissions in the Bay Area Air Basin and contain strategies necessary for emissions reductions through regulatory controls. Emissions projections are based on population, vehicle, and land use trends typically developed by the BAAQMD, Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG).

In April of 2017, the BAAQMD adopted the Final 2017 Clean Air Plan/Regional Climate Protection Strategy (CAP/RCPS; BAAQMD, 2017b). The 2017 CAP/RCPS provides a roadmap for BAAQMD’s efforts over the next few years to reduce air pollution and protect public health and the global climate. The CAP/RCPS includes the Bay Area’s first-ever comprehensive Regional Climate Protection Strategy, which identifies potential rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gas (GHG) emissions in the Bay Area. Measures included in the 2017 CAP/RCPS that address the transportation sector are in direct support of Plan Bay Area,

which was prepared by ABAG and MTC and includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan.

Any project that would not support the 2017 CAP/RCPS goals would be considered inconsistent with the 2017 CAP/RCPS. The recommended measure for determining project support of these goals is consistency with BAAQMD CEQA thresholds of significance (BAAQMD, 2023). As presented in the subsequent impact discussions, the Project would not exceed the BAAQMD significance thresholds; therefore, the Project would support the primary goals of the 2017 CAP/RCPS, and would not conflict with the Plan or obstruct its implementation. Therefore, the Project would have No Impact with respect to conflicting with or obstructing implementation of the applicable air quality plan.

b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Air pollutants of concern include carbon monoxide (CO), reactive organic compounds (ROG), nitrogen oxides (NO_x), particulate matter equal to or less than 10 micrometers (coarse particulates or PM₁₀), and particulate matter equal to or less than 2.5 micrometers (fine particulates or PM_{2.5}). NO_x and ROG are precursors to the formation of ozone. The Bay Area Air Basin is currently designated nonattainment for State and national (1-hour and 8-hour) ozone standards, for the State annual and 24-hour PM₁₀ standards, and for State annual and national 24-hour PM_{2.5} standards (BAAQMD, 2017a). The Bay Area Air Basin is designated attainment or unclassifiable with respect to the other ambient air quality standards. The Project would generate pollutant emissions during construction. The Project would relocate the existing fire station to a more efficient location, therefore operational emissions are expected to be reduced by the Project (see discussion below).

Construction Emissions

The emissions generated from construction activities include:

- Dust (including PM₁₀ and PM_{2.5}) primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe) such as grading, material handling, and travel on paved and unpaved surfaces;
- Combustion emissions of criteria air pollutants and precursors (ROG, NO_x, CO, SO₂, PM₁₀, and PM_{2.5}) primarily from operation of heavy off-road construction equipment, haul trucks, (primarily diesel-operated), and construction worker automobile trips (primarily gasoline-operated); and
- Fugitive ROG emissions from architectural coating.

To determine the significance of the Project's impact from air pollutant emissions, Marin County utilizes the significance criteria provided in the BAAQMD CEQA Air Quality Guidelines (BAAQMD, 2023), which are shown in **Table IV.3-1**. The California Air Pollution Control Officers (CAPCOA) California Emissions Estimator Model (CalEEMod), Version 2022.1.1.18 (CAPCOA, 2022) was used to model construction-related

emissions. The results are also displayed in **Table IV.3-1**. Construction would include site preparation, grading, building construction, paving, and coating. In accordance with the BAAQMD CEQA Air Quality Guidelines, construction emissions are evaluated based upon average daily construction emissions, including mobile, area, stationary, and fugitive sources.

Table IV.3-1: Estimated Unmitigated Average Daily Construction Emissions (pounds)

Condition	ROG	NOx	PM ₁₀ ¹	PM _{2.5} ¹	CO
Average Daily Construction Emissions ²	0.97	7.17	0.29	0.27	9.38
Significance Threshold	54	54	82	54	---
Significant (Yes or No)?	No	No	No	No	No

Note: 1. PM₁₀ and PM_{2.5} are exhaust emission only, per BAAQMD guidance.
 2. Since Project construction is estimated to occur during 2025, 2026, and 2027, the highest average daily construction emissions for each pollutant is displayed in the table.
 3. Mitigation Measure AQ-1 would further reduce these emissions.

Source: Appendix B: Air Quality Technical Report

In **Table IV.3-1**, average daily construction period emissions were compared to the BAAQMD significance thresholds. All construction-related emissions would be below the BAAQMD significance thresholds.

BAAQMD’s CEQA Air Quality Guidelines require that projects implement the basic best management practices (BMPs) for a project to have a less than significant construction-related fugitive dust emissions impact. Mitigation Measure AQ-1 would implement this provision and therefore reduce potentially significant fugitive dust impacts to a less-than-significant level.

Mitigation Measure AQ-1: BAAQMD’s Basic BMPs for Construction. During Project construction, BAAQMD’s basic BMPs for construction-related fugitive dust shall be implemented, which include:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted wood chips, mulch, or gravel.
- A publicly visible sign shall be posted with the telephone number and person to contact at the County regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Monitoring Measure AQ-1: Marin County's construction Project Manager will verify that the provisions of the measure have been implemented.

Operational Emissions

Project operations would generate combustion emissions of air pollutants (ROG, NO_x, CO, PM₁₀, and PM_{2.5}) primarily from motor vehicle trips, as well as minor emissions sources such as the reapplication of coatings, use of cleaners/solvents, and operation of landscaping equipment. The Project would relocate the existing Woodacre fire station to a more strategically accessible location, aiming to shorten emergency response times and subsequently reduce VMT, which would reduce operational air quality emissions. As a result of this shortened travel distance, the overall VMT associated with fire station operations is expected to decrease, leading to reduced fuel consumption and lower emissions from emergency response vehicles and staff.

The BAAQMD screening levels outlined in Chapter 4 of the 2023 CEQA Air Quality Guidelines provide screening levels for commercial projects to indicate whether implementing a project may have significant air pollutant impacts (BAAQMD, 2023). The screening levels for commercial buildings range from 89 to 765 KSF (thousand square feet). Based on the size of the Project and its categorization, it is evident that the estimated operational emissions resulting from the fire station relocation would be below the BAAQMD screening levels and a detailed assessment of operational air quality impacts is not warranted. Therefore, operational criteria pollutant emissions impacts would be less than significant.

c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

The BAAQMD has established thresholds of significance for exposure to toxic air contaminants (TACs) based on the projected increase in human health risk. Projects that would result in increased cancer risk of greater than 10 in a million or increased non-cancer risk greater than a Hazard Index of 1.0 are considered to have a significant impact. In addition, an increase in annual average ambient PM_{2.5} concentrations in excess 0.3 micrograms per cubic meter would be considered a significant impact. The BAAQMD recommends that lead agencies assess the incremental TAC exposure risk to all sensitive receptors within a 1,000-foot radius of a project's fence line (BAAQMD, 2023). Sensitive receptors include residences, hospitals, schools, day care facilities, and

nursing homes. The nearest sensitive receptors are a residence located approximately 80 feet west of the nearest part of the Clubhouse Parcel, and San Geronimo Preschool located approximately 270 feet southwest of the nearest part of the Clubhouse Parcel.

Construction Health Impacts

Project construction activities would result in the temporary emissions of diesel particulate matter (DPM) from use of diesel-powered on-site construction equipment and haul trucks. DPM is considered to be a TAC, with both carcinogenic and non-carcinogenic health effects.

The dose to which receptors are exposed is the primary factor affecting health risk from exposure to TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period when assessing TACs (such as DPM) that have only cancer or chronic non-cancer health effects.

Construction of the Project is anticipated to be carried out over an approximately 18-month period. Emissions modeling results indicate that DPM emissions (Exhaust PM₁₀) would average 0.29 pounds per construction day during the highest construction year (0.10 tons over the construction period), and PM_{2.5} emissions would average 0.27 pounds per construction day during the highest construction year (0.09 tons over the construction period) (**Table IV.3-1**). Given the relatively small amount of DPM emissions and short exposure time, the Project would not be expected to substantially increase cancer or non-cancer health risks for nearby sensitive receptors. However, certain individuals, such as pregnant women and their fetuses, infants, and children, are more sensitive to the adverse health effects of TACs (OEHHA, 2015). Even short-term exposure to TACs could result in an increased risk of adverse health effects. To address this potential impact, Mitigation Measure AQ-2 is specified below. Mitigation Measure AQ-2 requires the use of off-road equipment that meets Tier 4 Final Emissions Standards, which would reduce exhaust PM_{2.5} emissions by approximately 85 percent below unmitigated emissions, as shown in **Table IV. 3-2**. With implementation of Mitigation Measure AQ-2, construction TAC emissions impacts on sensitive receptors would be less than significant.

Table IV.3-2: Unmitigated and Mitigated Average Daily DPM Emissions (pounds)

Condition	Unmitigated	Mitigated	Percent Reduction
Average Daily Construction PM _{2.5} Emissions	0.27	0.04	85%

Note: Average daily PM_{2.5} emissions during highest construction year (2025).
 Source: Appendix B: Air Quality Technical Report.

Mitigation Measure AQ-2: Diesel Exhaust Emissions Reduction. During Project construction, all off-road diesel-powered equipment with engines greater than 25 horsepower shall meet Tier 4 Final Emissions Standards.

Mitigation Monitoring Measure AQ-2: Marin County's construction Project Manager shall verify that the provisions of the measure have been implemented.

Operational Health Impacts

Project operation would not result in a substantial quantity of new TAC emissions because it would not require the regular use of off-road heavy-duty mobile equipment (e.g., backhoes, bulldozers, excavators, etc.) or stationary sources. Emergency generators, if required, would be limited to 50 hours per year for testing/maintenance per California Air Resources Board (CARB)'s Stationary Diesel Engine Airborne Toxic Control Measure (ATCM) and emergency generator operation would be infrequent and subject to health risk screening and permit conditions by BAAQMD during the required air quality permitting, which would ensure a less-than-significant impact. Regarding Project on-road mobile source emissions, CARB considers facilities with more than 100 diesel heavy truck trips per day as a source of substantial TAC emissions (CARB, 2005). The Project would generate well below 100 diesel heavy truck trips per day (i.e., fire engines) and thus would not expose sensitive receptors to substantial TAC emissions. Furthermore, the proposed exit for fire engines onto Sir Francis Drake Boulevard is approximately 850 feet from nearby sensitive receptors; the main entry, which would be used by fire engines entering the station, is about 1,600 feet from sensitive receptors. Furthermore, nearby sensitive receptors are west and southwest of the Project site, and prevailing winds throughout the County are generally from the northwest (BAAQMD, 2017c); sensitive receptors are therefore upwind of the prevailing winds. For all of the reasons stated above, operational TAC emissions impacts on sensitive receptors would be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

BAAQMD Guidance includes screening distances for projects that are potential odor sources such as landfills, transfer stations, and refineries (BAAQMD, 2023). Fire stations are not listed by BAAQMD as a potential odor source and are not known to pose odors issues or produce objectionable odors. Therefore, operation of the Project would not be expected to produce offensive odors that would result in odor complaints. During construction, diesel powered vehicles and equipment used on-site would create localized odors, but these would be temporary and would dissipate quickly. Odor impacts would therefore be less than significant.

References

Bay Area Air Quality Management District (BAAQMD), 2017a. Air Quality Standards and Attainment Status. <http://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status#five> Accessed July 14, 2023.

Bay Area Air Quality Management District (BAAQMD), 2017b, Final 2017 Clean Air Plan, April 19, 2017.

Bay Area Air Quality Management District (BAAQMD), 2017c, Air District/About the Air District/In Your Community/Marin County, April 21, 2017, <https://www.baaqmd.gov/about-the-air-district/in-your-community/marin-county>

Bay Area Air Quality Management District (BAAQMD), CEQA Air Quality Guidelines, April 2023, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>

California Air Pollution Officers Association (CAPCOA), California Emissions Estimator Model User's Guide, May 2022, <http://www.caleemod.com/>

California Air Resources Board (CARB), 2005, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005.

California Office of Environmental Health Hazard Assessment (OEHHA), 2015, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015.

4. Biological Resources

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This section discusses the potential presence of sensitive biological resources regulated by federal or State resource agencies, habitat for special-status species,⁹ sensitive vegetation communities, and potentially jurisdictional wetlands and waters of the United States (U.S.) and/or of the State on the Project site (Figure 1 in Section II.F, Project Description), which consists of four parcels. Three of these parcels would be designated

⁹ Species that are protected pursuant to Federal or State endangered species laws, or have been designated as Species of Special Concern by the CDFW, or species that are not included on any agency listing but meet the definition of rare, endangered or threatened species of the State CEQA *Guidelines* Section 15380(b), are collectively referred to as “special-status species.”

open space, so the analysis in this section focuses on the Clubhouse Parcel (APN 172-371-04) where development of the fire station is planned (Figure 5 in Section II.F, Project Description). The analysis is based on literature review and database queries, as well as a reconnaissance-level survey of the Project site. Data sources reviewed for this evaluation included the following:

- Google Earth aerial photographs of the property (Google Earth, 2023);
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation list of Federal Endangered and Threatened Species that may occur in the proposed project location or may be affected by the proposed project (USFWS, 2023);
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (v 5.2.14) list of special-status species occurrences within the San Geronimo and surrounding USGS 7.5-minute topographic quadrangles (San Rafael, Bolinas, Inverness, Petaluma, Petaluma River, Point Reyes NE, and Novato) (CDFW, 2023);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (v8-03 0.39) known to occur within the San Geronimo and surrounding USGS 7.5-minute topographic quadrangles (CNPS, 2023);
- Biological and Fisheries constraints analyses for the Clubhouse Parcel (ESA, 2021; Podlech, 2021).

Species with potential to occur in the regional vicinity of the Project site, and their potential to occur within the Clubhouse Parcel, where development of the new fire station is proposed, are listed in **Table IV.4-1**.

Table IV.4-1. Special-Status Species Potential to Occur within the Clubhouse Parcel

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur within the Clubhouse Parcel
Pink sand-verbena <i>Abronia umbellata</i> var. <i>breviflora</i>	--/--/1B.1	Disturbed sandy areas, coastal dunes, and scrub from 0 – 10 meters. Blooms June -October.	Not Present. Suitable habitat not found at the Clubhouse Parcel.
Blasdale's bent grass <i>Agrostis blasdalei</i>	--/--/1B.2	Coastal bluffs, scrubs, prairies, dunes, gravelly soils from 0 - 150 meters. Blooms May – July.	Not Present. Suitable bluff or dune habitat not found at the Clubhouse Parcel.
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	--/--/1B.2	Cismontane woodland, valley and foothill grassland from 50 – 300 meters. Blooms April- June.	Unlikely. Suitable grassland habitat not found at the Clubhouse Parcel.
Sonoma alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE/--/1B.1	Freshwater marshes and swamps and riparian scrub from 5 – 365 meters. Blooms May – July.	Unlikely. Marginal habitat present. No CNDDDB occurrences of this species within 5 miles.
Napa false indigo <i>Amorpha californica</i> var. <i>napensis</i>	--/--/1B.2	Broadleaved upland forest (openings), chaparral, cismontane woodland from 50 - 2000 meters. Blooms April – July.	Low. Suitable habitat present but surveys in 2021 did not observe this species.
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--/1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland from 30 – 680 meters. Bloom period March – June.	Unlikely. Suitable scrub or grassland habitat not found in project area.

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur within the Clubhouse Parcel
Mt. Tamalpais manzanita <i>Arctostaphylos montana</i> ssp. <i>montana</i>	--/--/1B.3	Serpentine chaparral and valley and foothill grassland from 160 - 800 meters. Blooms February – April.	Unlikely. Serpentine soils not found at the Clubhouse Parcel. One CNDDB occurrence of this species within 5 miles.
Marin manzanita <i>Arctostaphylos virgata</i>	--/--/1B.2	Sandstone or granite outcrops in chaparral, broadleaved upland forest, closed-cone coniferous forest, North Coast coniferous forest from 1-800 meters. Blooms January – March.	Unlikely. Coniferous trees are present within the Clubhouse Parcel, but this species prefers stone outcrops. The three local CNDDB occurrences are all located on ridgetops.
Coastal marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	--/--/1B.2	Coastal marshes, seeps, adjacent sand, mesic coastal dunes, coastal scrub, marshes, and streamside coastal swamps from 0 – 150 meters. Blooms April – October.	Not Present. Suitable marsh or swamp habitat not found at the Clubhouse Parcel.
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--/1B.2	Alkali playa and flats, annual valley and foothill grassland, vernal pools, low ground, and flooded lands from 1 – 170 m. Blooms March – June.	Not Present. Suitable alkali habitat not found at the Clubhouse Parcel.
Thurber's reed grass <i>Calamagrostis crassiglumis</i>	--/--/2B.1	Slopes, meadows, mesic coastal scrub, and freshwater marshes and swamps from 10 – 3400 meters. Blooms May – August.	Unlikely. Marginal slope habitat; no observations within 5 miles.
Swamp harebell <i>Campanula californica</i>	--/--/1B.2	Marshy areas, bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, marshes, and swamps (freshwater), North Coast coniferous forest from 1 - 405 meters. Blooms June – September.	Not Present. Suitable marsh or swamp habitat not found at the Clubhouse Parcel.
Seaside bittercress <i>Cardamine angulata</i>	--/--/2B.1	Shady thickets, streambanks, forest lower montane coniferous forest, North Coast coniferous forest from 15 – 915 meters. Blooms January – July.	Not Present. Clubhouse Parcel is outside current known range of this species.
Lyngbye's sedge <i>Carex lyngbyei</i>	--/--/2B.2	Marshes and swamps (brackish, freshwater) from 0 - 10 meters. Blooms April – August.	Not Present. Suitable marsh or swamp habitat not found at the Clubhouse Parcel.
Tiburon paintbrush <i>Castilleja affinis</i> ssp. <i>neglecta</i>	FE/CT/1B.2	Open serpentine slopes in valley and foothill grassland from 0 – 300 meters. Blooms April – June.	Not Present. Open serpentine slopes not found at the Clubhouse Parcel. No CNDDB occurrences of this species within 5 miles.
Humboldt Bay owl's-clover <i>Castilleja ambigua</i> var. <i>humboldtiensis</i>	--/--/1B.2	Coastal salt marshes and swamps from 0 - 3 meters. Blooms April – August.	Not Present. Suitable marsh or swamp habitat not found at the Clubhouse Parcel.
Nicasio ceanothus <i>Ceanothus decornutus</i>	--/--/1B.2	Open, rocky serpentine slopes and ridges, maritime chaparral, sometimes on clay soils from 50 – 290 meters. Blooms March – May.	Not Present. Suitable serpentine habitat not found at the Clubhouse Parcel.
Mt. Vision ceanothus <i>gloriosus</i> var. <i>porrectus</i>	--/--/1B.3	Coastal bluffs, scrub, closed-cone pine forest, valley and foothill grassland, closed-cone coniferous forest, coastal prairie from 25 - 305 meters. Blooms February – May.	Not Present. Suitable bluff or scrub habitat not found at the Clubhouse Parcel.
Mason's ceanothus <i>Ceanothus masonii</i>	--/CR/1B.2	Openings and rocky serpentine slopes in chaparral from 150 – 450 meters. Blooms March – May.	Not Present. Suitable serpentine habitat not found at the Clubhouse Parcel.

Common Name Scientific Name	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur within the Clubhouse Parcel
Point Reyes salty bird's-beak <i>Chloropyron maritimum</i> ssp. <i>palustre</i>	--/--/1B.2	Coastal salt marsh usually with <i>Salicornia</i> , <i>Distichlis</i> , <i>Jaumea</i> , <i>Spartina</i> , etc. from 0-15 meters. Blooms June – October.	Not Present. Suitable salt marsh habitat not found at the Clubhouse Parcel.
Soft salty bird's-beak <i>Chloropyron molle</i> ssp. <i>molle</i>	FE/CR/1B.2	Coastal salt marshes and swamps from 0 – 10 meters. Blooms June – November.	Not Present. Coastal salt marshes and swamps not found at the Clubhouse Parcel.
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	--/--/1B.2	Coastal bluff scrub, coastal dunes, coastal prairie, on sandy soils. Blooms April – July.	Not Present. Suitable scrub or dune habitat not found at the Clubhouse Parcel.
Sonoma spineflower <i>Chorizanthe valida</i>	FE/CE/1B.1	Sandy coastal prairie from 10 – 90 meters. Blooms June – August.	Not Present. Sandy coastal prairie not found at the Clubhouse Parcel.
Bolander's water-hemlock <i>Cicuta maculata</i> var. <i>bolanderi</i>	--/--/2B.1	Marshes and swamps, coastal, fresh or brackish water from 4 – 120m. Blooms July – September.	Not Present. Suitable marsh or swamp habitat not found at the Clubhouse Parcel.
Franciscan thistle <i>Cirsium andrewsii</i>	--/--/1B.2	Mixed evergreen forest, northern coastal scrub and wetland, riparian areas along the coast. Affinity to serpentine soil. Grows from 13 – 1950m. Blooms March – July.	Unlikely. Marginally suitable riparian habitat present; no CNDDDB occurrences within 5 miles.
Mt. Tamalpais thistle <i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	--/--/1B.2	Broad-leaved upland forest, chaparral, meadows and seeps, serpentine seeps from 240 - 620 meters. Blooms May – August.	Unlikely. Marginally suitable forest habitat present. One CNDDDB occurrence of this species within 5 miles in more suitable habitat.
Round-headed Chinese houses <i>Collinsia corymbosa</i>	--/--/1B.2	Coastal sand dunes from 0 - 20 meters. Blooms April – June.	Not Present. Suitable dune habitat not found at the Clubhouse Parcel.
Baker's larkspur <i>Delphinium bakeri</i>	FE/CE/1B.1	Coastal scrub, broadleaved upland forest, valley and foothill grasslands, and decomposing shale slopes from 80 – 305 meters. Blooms March – May.	Unlikely. Marginal forest habitat present. No CNDDDB occurrences of this species within 5 miles.
Golden larkspur <i>Delphinium luteum</i>	FE/CR/1B.1	Moist sites, cliffs, coastal grassland, coastal scrub, coastal prairie, and chaparral, especially rocky soils. Less than 100 meters. Blooms March – May.	Not Present. Suitable rocky grassland habitat not found at the Clubhouse Parcel.
Western leatherwood <i>Dirca occidentalis</i>	--/--/1B.2	Chaparral, foothill woodland, mixed evergreen forest, broadleaved upland forest, closed-cone pine forest, north coastal coniferous forest, and wetland-riparian areas. Equally likely to occur in wetlands and non-wetlands from 12 – 560 meters. Blooms January – March.	Moderate (outside development footprint). Oak woodland and evergreen forests at the site provide suitable habitat. One CNDDDB occurrence of this species within 5 miles. Surveys for this species were negative in 2021.
Koch's cord moss <i>Entosthodon kochii</i>	--/--/1B.3	Cismontane woodland (soil). Riverbanks on newly exposed soil from 180 to 1,000 meters.	Unlikely. One CNDDDB occurrence of this species within 5 miles of the Project site, but site out of species' preferred elevation range.
Tiburon buckwheat <i>Eriogonum luteolum</i> var. <i>caninum</i>	--/--/1B.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland from 20 – 630 meters. Blooms May – September.	Unlikely. Suitable grassland habitat not found at the Clubhouse Parcel. One CNDDDB occurrence of this species within 5 miles, on serpentine soil.
Bluff wallflower <i>Erysimum concinnum</i>	--/--/1B.2	Cliffs, coastal bluffs, dunes, prairies, from 0 - 400 meters. Blooms February – July.	Not Present. Suitable bluff or dune habitat not found at the Clubhouse Parcel.

Common Name Scientific Name	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur within the Clubhouse Parcel
Minute pocket-moss <i>Fissidens pauperculus</i>	--/--/1B.2	North Coast coniferous forest with damp coastal soils from 10 – 1024 meters.	Unlikely. No suitable forest habitat within the Clubhouse Parcel. Nearest records in Mt. Tam State Park more than 5 miles south.
Marin checker lily <i>Fritillaria lanceolata</i> var. <i>tristulis</i>	--/--/1B.1	Coastal bluffs, coastal scrub, coastal prairie. Found in canyons, riparian areas, and rock outcrops, often serpentine from 5 – 305 meters. Blooms February to May.	Unlikely. Bluff and scrub habitat are not present at the Clubhouse Parcel. Nearest records mapped to Nicasio reservoir area; older record locations are unclear.
Fragrant fritillary <i>Fritillaria liliacea</i>	--/--/1B.2	Coastal bluff scrub, coastal scrub, valley and foothill grassland; heavy clay soils, often serpentinite. Blooms February – April.	Unlikely. No scrub or clay habitat is present at the Clubhouse Parcel; no CNDDDB records occur within 5 miles of the site.
Blue coast gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	--/--/1B.1	Coastal dunes and scrub from 0 – 580 meters. Blooms April – July.	Not Present. Suitable dune habitat not found at the Clubhouse Parcel.
Woolly-headed gilia <i>Gilia capitata</i> ssp. <i>tomentosa</i>	--/--/1B.1	Sea bluffs, serpentine outcrops, valley and foothill grassland from 10 - 220 meters. Blooms May – July.	Unlikely. Marginal grassland habitat is present at the Clubhouse Parcel. One CNDDDB occurrence of this species within 5 miles in more suitable habitat.
Dark-eyed gilia <i>Gilia millefoliata</i>	--/--/1B.2	Coastal dunes from 2 – 30 meters. Blooms April – July.	Not Present. Suitable dune habitat not found at the Clubhouse Parcel.
Diablo helianthella <i>Helianthella castanea</i>	--/--/1B.2	Broad-leaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland from 20 – 960 meters. Blooms March – June.	Unlikely. Suitable forest habitat present, but no CNDDDB records within 5 miles. The only record for this species in Marin County is from 1938.
Congested-headed hayfield tarplant <i>Hemizonia congesta</i> ssp. <i>congesta</i>	--/--/1B.2	Valley and foothill grassland; sometimes roadsides from 30 – 1060 meters. Blooms April – November.	Unlikely. Suitable grassland habitat not found at the Clubhouse Parcel.
Water star-grass <i>Heteranthera dubia</i>	--/--/2B.2	Marshes and swamps (alkaline, still or slow-moving water); usually in slightly eutrophic waters. Blooms July – August.	Not Present. Suitable marsh or swamp habitat not found at the Clubhouse Parcel.
Marin dwarf-flax <i>Hesperolinon congestum</i>	FT/CT/1B.1	Serpentine grassland and chaparral. Less than 200 meters. Blooms April – August.	Unlikely. Serpentine grassland and chaparral are not found at the Clubhouse Parcel. One CNDDDB occurrence of this species within 5 miles.
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT/CE/1B.1	Coastal prairie, coastal scrub, valley and foothill grassland, often in clay or sandy soil from 0 – 110 meters. Blooms June – October.	Unlikely. Marginal grassland habitat present. No CNDDDB occurrences of this species within 5 miles.
Point Reyes horkelia <i>Horkelia marinensis</i>	--/--/1B.2	Sandy coastal flats, coastal dunes, coastal prairie, coastal scrub from 5 – 760. Blooms May – September.	Not Present. Suitable coastal habitat not found at the Clubhouse Parcel.
Thin-lobed horkelia <i>Horkelia tenuiloba</i>	--/--/1B.2	Sandy soils within open chaparral from 50 – 500 meters. Blooms April – July.	Not Present. Suitable sandy habitat not found at the Clubhouse Parcel.
Island tube lichen <i>Hypogymnia schizidiata</i>	--/--/1B.3	Closed-cone coniferous forest, chaparral from 360 - 405 meters.	Not Present. Project site outside species' known elevation range.
Small groundcone <i>Kopsiopsis hookeri</i>	--/--/2B.3	Open woodland, mixed conifer forest, generally on <i>Gaultheria shallon</i> , occasionally either <i>Arbutus menziesii</i> or <i>Arctostaphylos uva-ursi</i> from 120 – 1,435 meters. Blooms April – August.	Unlikely. Occurs in specific patchy locations in northern California. No records within 5 miles.

Common Name Scientific Name	Listing Status USFWS/ CDFW/Other	Habitat Description / Blooming Period	Potential to Occur within the Clubhouse Parcel
Perennial goldfields <i>Lasthenia californica</i> <i>ssp. macrantha</i>	--/--/1B.2	Grassland, dunes along immediate coast, coastal bluff scrub, coastal dunes, coastal scrub from 5 - 520 meters. Blooms all year, mostly May – August.	Not Present. Suitable coastal habitat not found at the Clubhouse Parcel.
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE/--/1B.1	Vernal pools and seasonal wetlands in grassland and woodland from 4 – 180 meters. Blooms March – June.	Not Present. Vernal pools and seasonal wetlands not found at the Clubhouse Parcel. No CNDDDB occurrences of this species within 5 miles.
Tamalpais lessingia <i>Lessingia micradenia</i> var. <i>micradenia</i>	--/--/1B.2	Thin, gravelly soil of serpentine outcrops, roadcuts, chaparral, valley and foothill grassland from 100 - 500 meters. Blooms June – October.	Unlikely. Marginally suitable grassland habitat present. One CNDDDB record of this species within 5 miles, in more suitable habitat.
Mason's lilaepsis <i>Lilaepsis masonii</i>	--/CR/1B.1	Intertidal marshes, streambanks, brackish and freshwater marshes and swamps, and riparian scrub. Less than 36 meters. Blooms April – November.	Not Present. Suitable marsh habitat not found at the Clubhouse Parcel. No CNDDDB occurrences of this species within 5 miles.
Pitkin marsh lily <i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE/CE/1B.1	Freshwater marshes and swamps, meadows and seeps, and valley oak scrub from 35 – 60 meters. Blooms June – July.	Not Present. This species only known from Pitkin marsh in Sonoma County.
Coast lily <i>Lilium maritimum</i>	--/--/1B.1	Coastal prairie or scrub, peatland, gaps in closed-cone-pine forest, broad-leaved upland forest, closed-cone coniferous forest, freshwater marshes and swamps, North Coast coniferous forest from 5 - 475 meters. Blooms May – August.	Not Present. Suitable coastal habitat not found at the Clubhouse Parcel.
Marsh microseris <i>Microseris paludosa</i>	--/--/1B.2	Moist grassland, open woodland, Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland from 5 - 355 meters. Blooms April – July.	Unlikely. Suitable forest habitat present; however, no records within 5 miles.
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	--/--/1B.1	Vernal pools, meadows and seeps, and mesic areas within cismontane woodland, lower montane coniferous forest and valley and foothill grassland from 5 - 1740 meters. Blooms April – July.	Not Present. Suitable vernal pool habitat not found at the Clubhouse Parcel.
Marin County navarretia <i>rosulata</i>	--/--/1B.2	Rocky, serpentine areas, closed-cone coniferous forest, chaparral from 200 - 635 meters. Blooms May – July.	Unlikely. No suitable serpentine habitat present. One CNDDDB occurrence of this species within 5 miles in more suitable habitat.
North Coast phacelia <i>Phacelia insularis</i> var. <i>continentis</i>	--/--/1B.2	Sandy soils, bluffs, coastal dunes from 0 – 180 meters. Blooms March – May.	Not Present. Suitable coastal habitat not found at the Clubhouse Parcel.
White-rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/1B.1	Grassy or rocky areas of cismontane woodland, and valley and foothill grasslands, often serpentine. Less than 620 meters. Blooms March – May.	Unlikely. Marginal rocky habitat present. No CNDDDB occurrences of this species within 5 miles.
Hairless popcornflower <i>Plagiobothrys glaber</i>	--/--/1A	Coastal salt marsh, alkali flats from 15 to 180 meters. Blooms April – May	Not Present. Suitable alkali habitat not found at the Clubhouse Parcel.
Petaluma popcornflower <i>Plagiobothrys mollis</i> var. <i>vestitus</i>	--/--/1A	Presumed extinct. Wet sites in grassland, coastal salt marshes and swamps, mesic valley and foothill grassland from 10 - 50 meters. Blooms May – July.	Not Present. Suitable swamp habitat not found at the Clubhouse Parcel.

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North Coast semaphore grass <i>Pleuropogon hooverianus</i>	--/CT/1B.1	Wet, grassy areas of upland forest, meadows and seeps, and North Coast coniferous forest. Less than 1300 meters. Blooms March – June.	Low. Suitable meadow habitat present on slopes. A CNDDDB occurrence of this species from 2013 within two miles. Surveys for this species in 2021 were negative.
Tamalpais oak <i>Quercus parvula</i> var. <i>tamalpaisensis</i>	--/--/1B.3	Understory conifer woodland from 100 - 750 meters. Blooms March -April.	Unlikely. There are CNDDDB occurrences of this species within 5 miles but the Project site is out of species' preferred elevation range.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--/--/1B.2	Ponds, ditches, marshes and swamps (shallow freshwater) from 0 - 650 meters. Blooms May – November.	Unlikely. No suitable habitat within the Clubhouse Parcel. No observations within 5 miles.
Point Reyes checkerbloom <i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	--/--/1B.2	Freshwater marshes and swamps near the coast from 3 - 75 meters. Blooms April – September.	Not Present. Suitable marsh or swamp habitat not found at the Clubhouse Parcel.
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	--/--/1B.1	Dry ridges near coast, serpentine from 50 - 430 meters. Blooms May – June.	Unlikely. Suitable ridge habitat not found at the Clubhouse Parcel. One CNDDDB occurrence of this species within 5 miles in suitable habitat.
Santa Cruz microseris <i>Stebbinsoseris decipiens</i>	--/--/1B.2	Open, sandy, shale-y, or serpentine sites, coastal, broad-leaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland from 10 - 500 meters. Blooms April – May.	Not Present. Suitable coastal habitat not found at the Clubhouse Parcel.
Mount Burdell jewelflower <i>Streptanthus anomalus</i>	--/--/1B.1	Openings in cismontane woodland from 50 - 150 meters. Blooms May – June.	Unlikely. Marginal woodland habitat; no observations reported within 5 miles.
Tamalpais jewelflower <i>Streptanthus batrachopus</i>	--/--/1B.3	Serpentine barrens, chaparral, closed-cone coniferous forest from 305 - 650 meters. Blooms April – July.	Unlikely. Suitable serpentine habitat not found at the Clubhouse Parcel. One CNDDDB occurrence of this species within 5 miles in suitable habitat.
Mt. Tamalpais bristly jewelflower <i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i>	--/--/1B.2	Dry, valley and foothill open grassland, chaparral, open conifer/oak woodland, occasionally on serpentine from 150 - 800 meters. May – August.	Unlikely. Marginal grassland habitat at the Clubhouse Parcel. One CNDDDB occurrence of this species within 5 miles in more suitable habitat.
Two-fork clover <i>Trifolium amoenum</i>	FE/--/1B.1	Moist, heavy soils, disturbed area; coastal bluff scrub, valley and foothill grassland (sometimes serpentinite) from 0 - 415 meters. Blooms April – June.	Unlikely. Marginal grassland habitat present. No CNDDDB occurrences of this species within 5 miles.
Pacific Grove clover <i>Trifolium polyodon</i>	--/CR/1B.1	Closed-cone coniferous forest, coastal prairie, moist meadows, streamsides and seeps, valley and foothill grassland from 0 - 425 meters. Blooms April – July.	Unlikely. Suitable habitat present along streams within the Clubhouse Parcel, but no CNDDDB occurrences of this species within 5 miles.
San Francisco owl's-clover <i>Triphysaria floribunda</i>	--/--/1B.2	Coastal grassland, serpentine slopes, coastal prairie, coastal scrub, valley and foothill grassland from 0 - 200 meters. Blooms April – June.	Not Present. Suitable coastal habitat not found at the Clubhouse Parcel.
Coastal triquetrella <i>Triquetrella californica</i>	--/--/1B.2	Coastal bluff scrub, coastal scrub from 10 - 100 meters.	Not Present. Suitable coastal habitat not found at the Clubhouse Parcel.

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Invertebrates			
Western bumble bee <i>Bombus occidentalis</i>	--/CC/--	Found in habitats with flowering plants and suitable soils for burrowing. Once common and widespread, species has declined precipitously in California.	Unlikely. Species is not likely in forested areas. Two nearby CNDDDB records from open areas near Nicasio reservoir.
Monarch butterfly <i>Danaus plexippus</i>	FC/--/--	Eucalyptus or Monterey pine groves (winter sites). Does not breed in the vicinity.	Unlikely. Suitable wintering habitat not found at the Clubhouse Parcel.
California freshwater shrimp <i>Syncaris pacifica</i>	FE/CE/--	Stream edges and eddies with undercut banks, exposed root systems, or overhanging vegetation.	Unlikely. Species has moderate potential to occur in San Geronimo Creek, south of the Clubhouse Parcel. No habitat present within the Clubhouse Parcel.
Fish			
Green sturgeon – southern DPS <i>Acipenser medirostris</i>	FT	These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, and Trinity rivers. Spawns at temperatures between 8° and 14°C. Preferred spawning substrate is large cobble but can range from clean sand to bedrock.	Not Present. The Project site is outside of this species' range.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC/--	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not Present. Suitable brackish habitat not found at the Clubhouse Parcel.
Delta smelt <i>Hypomesus transpacificus</i>	FT/CE/--	Endemic to the Sacramento-San Joaquin Delta distributed from Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, and Solano Counties. Spawning occurs in brackish-water river channels and sloughs of the Delta.	Not Present. The Project site is outside of the species' range.
Tomales roach <i>Lavinia symmetricus</i> ssp. 2	--/CSC/--	Found in small streams and isolated pools, restricted to Walker Creek and Lagunitas Creek.	Not Present. Species has been recorded in San Geronimo Creek (CDFW 2023). No habitat present within the Clubhouse Parcel.
Coho salmon <i>Oncorhynchus kisutch</i> Central California Coast ESU	FE/CE/--	CCC ESU includes populations south of Punta Gorda, California to and including Aptos Creek, as well as San Francisco Bay. Larger rivers serve as migration pathways for adults; juveniles rear in smaller tributaries. Require beds of loose, coarse gravel for spawning plus cover, cool water with sufficient dissolved oxygen.	Not Present. Extant spawning run in Lagunitas Creek and smolt recorded in San Geronimo Creek (Turtle Island Network, 2022). No habitat present within the Clubhouse Parcel.
Chinook Salmon <i>Oncorhynchus tshawytscha</i> California coastal ESU	FT/--	California coastal ESU includes populations from Klamath River south to the Russian River, with occasional occurrences farther south in Marin County; require beds of loose, coarse gravel for spawning plus cover, cool water with sufficient dissolved oxygen.	Not Present. Smolt recorded in San Geronimo Creek (Turtle Island Network, 2022). No habitat present within the Clubhouse Parcel.

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Steelhead <i>Oncorhynchus (=Salmo) mykiss irideus</i> Central California Coast DPS	FT/--	Spawns and rears in coastal streams between the Russian River in Sonoma County and Soquel Creek in Santa Cruz County, as well as drainages tributary to San Francisco Bay, where gravelly substrate and shaded riparian habitat occurs.	Not Present. Extant spawning run in Lagunitas Creek (CDFW 2023) and smolt recorded in San Geronimo Creek (Turtle Island Network, 2022). No habitat present within the Clubhouse Parcel.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	--/CSC/--	Freshwater, moderate salty water, slow-moving marshy sections of rivers and dead-end sloughs. Floodplains may be important for spawning.	Not Present. The Project site is outside the known range of this species.
Longfin smelt <i>Spirinchus thaleichthys</i>	FC/CT/--	Found throughout the nearshore coastal waters and open waters of San Francisco Bay-Delta including the river channels and sloughs of the Delta. Spawns in the Delta.	Not Present. The Project site is outside the species' range.
Amphibians			
California tiger salamander <i>Ambystoma californiense</i>	FT/CT/--	Vernal or temporary pools in annual grasslands, or open stages of woodlands. Typically, adults use mammal burrows for aestivation in non-breeding season.	Unlikely. Vernal and temporary pools and burrows not observed at the Clubhouse Parcel. No CNDDDB occurrences of this species within 5 mi. of the site.
California giant salamander <i>Dicamptodon ensatus</i>	--/CSC/--	Found in humid coastal forests, especially in Douglas-fir, redwood, red fir, montane and valley-foothill riparian habitats. They live in or near cool, rocky streams, and occasionally lakes and ponds.	Unlikely. No suitable perennial streams at the Clubhouse Parcel. Several CNDDDB records in the watershed within 5 miles of the site.
Foothill yellow-legged frog <i>Rana boylei</i>	--/CE/--	Partly-shaded, usually perennial, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Unlikely. No suitable streams at Clubhouse Parcel. There is a CNDDDB occurrence within San Geronimo Creek and several other CNDDDB records occur in the watershed within 5 miles.
California red-legged frog <i>Rana draytonii</i>	FT/CSC/--	Streams, freshwater pools, and ponds with overhanging vegetation. Also found in woods adjacent to streams. Requires permanent or ephemeral water sources such as reservoirs and slow moving streams and needs pools of >0.5 m depth for breeding.	Unlikely. No suitable breeding habitat within the Clubhouse Parcel. One recent (2006) CNDDDB record found adult CRLF upstream in Lagunitas Creek near Kent Lake outflow.
Red-bellied newt <i>Taricha rivularis</i>	--/CSC/--	Found in rivers and streams in coastal woodlands and redwood forests. Hide in vegetation and under stones during the day.	Unlikely. The Clubhouse Parcel is outside the known range of this species.
Reptiles			
Western pond turtle <i>Emys marmorata</i>	--/CSC/--	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.	Unlikely. No perennial streams within the Clubhouse Parcel to provide habitat. CNDDDB occurrence in the creek within 5 miles of the Project site.
Birds			
Western burrowing owl <i>Athene cunicularia</i>	--/CSC/--	Open grasslands and shrublands where perches and existing rodent burrows are available.	Unlikely. Clubhouse Parcel lacks open grassland and burrows and there are no CNDDDB records within 5 miles.

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Marbled murrelet <i>Brachyramphus marmoratus</i>	FT/CE/--	Nests in dense primary or second growth coniferous forest; feeds offshore.	Unlikely. No records of this species breeding in Marin County.
Swainson's hawk <i>Buteo swainsoni</i>	--/CT/--	Nest peripheral to riparian systems, lone trees in agricultural fields, pastures and roadside trees, open grasslands, alfalfa crops.	Not Present. The Clubhouse Parcel is outside of the known nesting range of this species.
Western snowy plover <i>Charadrius nivosus</i>	FT/--/CSC	Nests on the ground on broad open marine or estuarine beaches or salt or dry mud flats. Requires sandy, gravelly, or friable soil substrate for nesting.	Not Present. Suitable beach or mud flat habitat not found at the Clubhouse Parcel.
Yellow rail <i>Coturnicops noveboracensis</i>	--/CSC/--	Habitat includes shallow marshes, wet meadows, drier fresh-water and brackish marshes, as well as dense, deep grass, and rice fields. Forages for small snails, aquatic insects, and wetland plant seeds in shallow water concealed by dense vegetation.	Unlikely. Suitable nesting and foraging habitat not found at the Clubhouse Parcel and no CNDDB records in the vicinity.
Black swift <i>Cypseloides niger</i>	--/CSC/--	Nest behind or next to waterfalls and wet cliffs, sea cliffs and in sea caves, occasionally in limestone caves, in dark inaccessible sites with unobstructed flight path.	Unlikely. Suitable nesting and foraging habitat not found at the Clubhouse Parcel.
Snowy egret <i>Egretta thula</i>	--/CSC/-- (rookery site)	Colonial nester, with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Not Present. No egret rookeries observed or known from the Clubhouse Parcel.
White-tailed kite <i>Elanus leucurus</i>	--/FP/--	Nests in shrubs and trees next to grasslands, forages over grasslands and agricultural lands.	Moderate. Marginal nesting and good foraging habitat present at the Clubhouse Parcel.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	--/CSC/--	Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	Not Present. Suitable salt marsh nesting habitat is not present.
California black rail <i>Laterallus jamaicensis coturniculus</i>	--/CT,FP/--	Salt and freshwater marshes, grassy wet meadows.	Not Present. Suitable marsh habitat not found at the Clubhouse Parcel.
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	--/CSC/--	Nests in dense vegetation, San Pablo Bay tidal salt marsh.	Not Present. Suitable marsh nesting habitat is not present.
California Ridgway's rail <i>Rallus obsoletus</i>	FE/CE,FP/--	Salt marsh wetlands along the San Francisco Bay.	Not Present. Suitable marsh habitat not found at the Clubhouse Parcel.
Bank swallow <i>Riparia</i>	--/CT/--	Nests in steep sand, dirt, or gravel banks, in burrows dug near the top of the bank, along the edge of inland water, or along the coast, or in gravel pits, road embankments.	Not Present. Suitable bank habitat not found at the Clubhouse Parcel.
Yellow warbler <i>Setophaga petechia</i>	--/CSC/--	Breeds in wet, deciduous thickets, especially willows.	Unlikely. Preferred willow riparian vegetation is limited at the Clubhouse Parcel.
California least tern <i>Sterna antillarum browni</i>	FE/CE,FP/--	Open beaches free of vegetation along the California coast.	Not Present. Suitable beach habitat not found at the Clubhouse Parcel.

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Northern spotted owl <i>Strix occidentalis caurina</i>	FT/CT/--	Nests in dense primary or second growth coniferous forest; forages primarily for rodents.	High. The coast redwood forest north of the Clubhouse Parcel provides suitable habitat. Several CNDDDB records within 1 mile of site.
Mammals			
Pallid bat <i>Antrozous pallidus</i>	--/CSC/ WBWG High	Most common in open, dry habitats with rocky areas for roosting. Roosts in buildings, caves, or cracks in rocks. Forages primarily on the ground.	Moderate. Marginal roosting and foraging habitat present. One CNDDDB record from 1892 near the Project site; another from 1987 within 5 miles.
Point Reyes mountain beaver <i>Aplodontia rufa phaea</i>	--/CSC/--	Forested areas at sea level to timberline peaks, second-growth trees and shrubs near water. Requires deep soils to construct burrows.	Unlikely. This species is found almost exclusively within Point Reyes National Seashore. CNDDDB record near the Project site dates from 1909, and is possibly extirpated.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/CSC/ WBWG High	Inhabits caves and mines, but may also use bridges, buildings, rock crevices and tree hollows in coastal lowlands, cultivated valleys and nearby hills characterized by mixed vegetation throughout California below 3,300 meters.	Moderate. Suitable roosting habitat present within the Clubhouse Parcel. Nearest occurrence from 1946 is 3-4 miles from the site.
Silver-haired bat <i>Lasionycteris noctivagans</i>	--/*/ WBWG Medium	Primarily a coastal and montane forest dweller. Roosts in dense foliage of trees, in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks. Needs drinking water.	Moderate. Suitable habitat is present at the Clubhouse Parcel; however, no CNDDDB records occur within 5 miles.
Western red bat <i>Lasiurus blossevillii</i>	--/CSC/WB WG High	Roosts in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. Associated with intact riparian habitat (particularly willows, cottonwoods, and sycamores).	Unlikely. Marginally suitable riparian and edge habitat is present at the Clubhouse Parcel; however, no CNDDDB records occur within 5 miles.
Hoary bat <i>Lasiurus cinereus</i>	--/*/ WBWG Medium	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for foraging. Roosts in dense foliage of medium to large trees. Feeds primarily on moths; requires water.	Moderate. Suitable tree roosting habitat present within the Clubhouse Parcel. Nearest occurrence reported in CNDDDB in 1933 is within 5 miles of the site.
Salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE,FP/--	Dense pickleweed vegetation required with other halophytes often present.	Not Present. Suitable salt marsh habitat not found at the Clubhouse Parcel.
American badger <i>Taxidea taxus</i>	--/CSC/--	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground, and preys on burrowing rodents.	Unlikely. Suitable burrows and burrowing rodents not observed within the Clubhouse Parcel.

NOTES:

USGS 7.5- minute quads San Geronimo, Bolinas, Inverness, San Rafael, Petaluma, Petaluma River, Point Reyes NE, and Novato.

a Potential to Occur Categories:

Not Present = Site and/or immediate vicinity do not support suitable habitat for a particular species. Site is outside of the species known range. Species identified as unlikely to occur are not addressed further in the Habitat Assessment.

Unlikely = The site and/or immediate vicinity only provide limited or low-quality habitat.

Moderate Potential = The site and/or immediate vicinity provide suitable habitat.

High Potential = The site and/or immediate vicinity provide ideal habitat conditions.

Present = Species has been observed at the site.

STATUS CODES:

FEDERAL: (U.S. Fish and Wildlife Service)
FE: Federally Endangered
FT = Federally Threatened
FC = Candidate for federal listing
FD= Delisted

STATE:

CT = Listed as Threatened by the State of California
CE= Listed as Endangered by the State of California
CC = California Candidate for Listing
CSC = California Species of Special Concern
FP= California Department of Fish and Wildlife designated
“fully protected”

OTHER:

California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR):
1A = Presumed extirpated in California; Rare or extinct in other parts of its range.
1B = Rare, threatened, or endangered throughout range; Most species in this rank are endemic to California.
2A = Extirpated in California, but common in other parts of its range.
2B = Rare, threatened, or endangered in California but common in other parts of its range.
3 = Need more information about species to assign it a ranking.
4 = Limited distribution and therefore warrants monitoring of status.
.1 = Seriously endangered in California
.2 = Fairly endangered in California
LS= Locally Significant Species

WBWG = Western Bat Working Group:

Low = Stable population

Medium = Need more information about the species, possible threats, and protective actions to implement.

High= Imperiled or at high risk of imperilment.

Xerces Society for Invertebrate Conservation (Xerces)

CI = Critically imperiled

IM = Imperiled

VU = Vulnerable

a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special-status plants from the regional vicinity of the Project site are listed in Table IV.4-1, which also identifies their potential to occur within the Clubhouse Parcel where development is proposed. Three rare plants, North Coast semaphore grass (*Pleuropogon hooverianus*), Napa false indigo (*Amorpha californica* var. *napensis*), and congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*) have been observed in the local vicinity of the Project site in grassland or woodland habitat. However, no special-status plants were observed during the 2021 botanical survey of the Clubhouse Parcel (ESA 2021), which was timed to coincide with blooming times for late-blooming plants, including the three species above. No rare plants are expected within portions of the site identified as developed; or within areas with turf and “landscape trees,” which were previously managed and are covered with non-native grasses and herbs. Early- or mid-season blooming rare plants may be present in oak savanna or woodland habitat areas of the Project site, but no development is proposed in these areas. Thus, no impacts are anticipated to rare plants.

Special-status fish and wildlife recorded in the Project site vicinity are also identified in Table IV.4-1, which describes their potential to occur within the Clubhouse Parcel. San Geronimo Creek hosts extant runs of steelhead (*Oncorhynchus mykiss irideus*) and Coho salmon (*Oncorhynchus kisutch*), including within the reach on the Project site, but

the Clubhouse Parcel does not contain riverine aquatic habitat that supports salmonids or other special-status fish (Podlech, 2021). Two culverts under Sir Francis Drake Blvd. convey water from the Clubhouse Parcel towards San Geronimo Creek. As discussed in Section IV.10, Hydrology and Water Quality, however, adherence to regulatory requirements for stormwater management during Project construction and operation will avoid water quality and hydrology impacts on the fishery downstream.

Foothill yellow-legged frog (*Rana boylei*) is reported at two locations in Nicasio Creek, a tributary of Lagunitas Creek, one and two miles north of the Project site (CDFW 2023). Drainages within the Project site do not provide habitat for this species, which prefers rocky, perennial headwater streams. Similarly, due to the absence of pond and perennial stream habitat, neither California red-legged frog (*Rana draytonii*) nor California giant salamander (*Dicamptodon ensatus*) are expected on the Clubhouse Parcel. Western pond turtle (*Emys marmorata*) is also unlikely in this area due to lack of pond, reservoir, or perennial stream habitat. In addition, all seasonal waters exiting the site are culverted and lack habitat features; thus, no special-status amphibian species are expected on the Clubhouse Parcel. Thus, no impacts to special-status amphibians or reptiles are expected from the Project.

An active northern spotted owl (*Strix occidentalis caurina*) nest and activity center is located northeast of the Project site in Roy's Redwoods Preserve (USFWS 2023), shown on Figure 1. The northern spotted owl is a federal and State-listed threatened species, but this nest is located ¼-mile northeast, on the opposite side of the ridge, and thus would be insulated from potential disturbance resulting from construction activity and fire station operations at the site. No impacts would occur to northern spotted owl and no mitigation is required for this species. Other migratory birds, including raptor species such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and white-tailed kite (*Elanus leucurus*), have potential to nest along waterways and in trees and other vegetation within the Clubhouse Parcel and on the greater Project site. Mitigation Measure BIO-1 is included to provide pre-construction nesting bird surveys and avoidance of identified nesting sites with a suitable buffer until young birds have fledged. Implementation of this measure would reduce impacts on nesting birds to a less-than-significant level.

The California species of special concern pallid bat (*Antrozous pallidus*) has been recorded in the area, and other bat species also have potential to roost in large trees or disused buildings. Mitigation Measure BIO-2 below would require bat habitat surveys followed by a bat-safe two-step removal process for trees or structures with potential bat habitat. Implementation of this measure would reduce impacts on roosting bats to a less-than-significant level.

Mitigation Measure BIO-1 Nesting Bird Protection

Within two weeks prior to any tree trimming or vegetation removal in nesting season (February 1 to August 31), a qualified biologist will conduct a nesting bird survey within each area where work will take place and all areas within 250 feet. Nesting birds with active nests in the vicinity of the construction area will be

avoided by a minimum buffer of 100 feet, or as determined by the qualified biologist in communication with the California Department of Fish and Wildlife. Construction work may continue outside of the no-work buffer.

Mitigation Monitoring Measure BIO-1:

Prior to the start of construction, the County will employ the services of a biological monitor to carry out the survey and monitoring provisions of Mitigation Measure BIO-1. The Biological Monitor will report to the County's Project Manager monitoring activities and any encounter with sensitive species.

The County will report all observations of sensitive species made during construction to the California Natural Diversity Database (CNDDDB).

Mitigation Measure BIO-2 Bat Roost Protection

Before any ground-disturbing activity or building demolition, a qualified bat biologist will conduct surveys of all potential bat habitat, including areas suitable for maternity roosts and/or winter hibernacula prior to initiation of construction activities. Surveys will be conducted within 3 months prior to the commencement of construction or demolition activities. Removal or trimming of trees or demolition of buildings showing evidence of bat hibernation or maternity activity will occur during the period least likely to affect inactive wintering bats and active bat maternity roosts (i.e., avoid roost disturbance from October 15 to February 15 for winter hibernacula, and April 15 to August 15 for maternity roosts). Tree removal or demolition may occur during sensitive bat roosting periods if a qualified bat biologist confirms the absence of overwintering habitat or maternity roosts. If active day or night (non-maternity) roosts are found, the bat biologist will supervise tree removal or building demolition over two days in order to allow individual bats to depart prior to tree removal or building demolition.

Mitigation Monitoring Measure BIO-2:

Prior to start of construction, the County will employ the services of a biological monitor to carry out the survey and monitoring provisions of Mitigation Measure BIO-2. The Biological Monitor will report to the County's Project Manager monitoring activities and any encounter with sensitive species.

The County will report all observations of sensitive species made during construction to the California Natural Diversity Database (CNDDDB).

- b) Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

The Project site (Figure IV.4-1) includes parts of San Geronimo and Larsen Creeks, riparian forest, oak woodlands, and non-native grassland. These vegetation communities

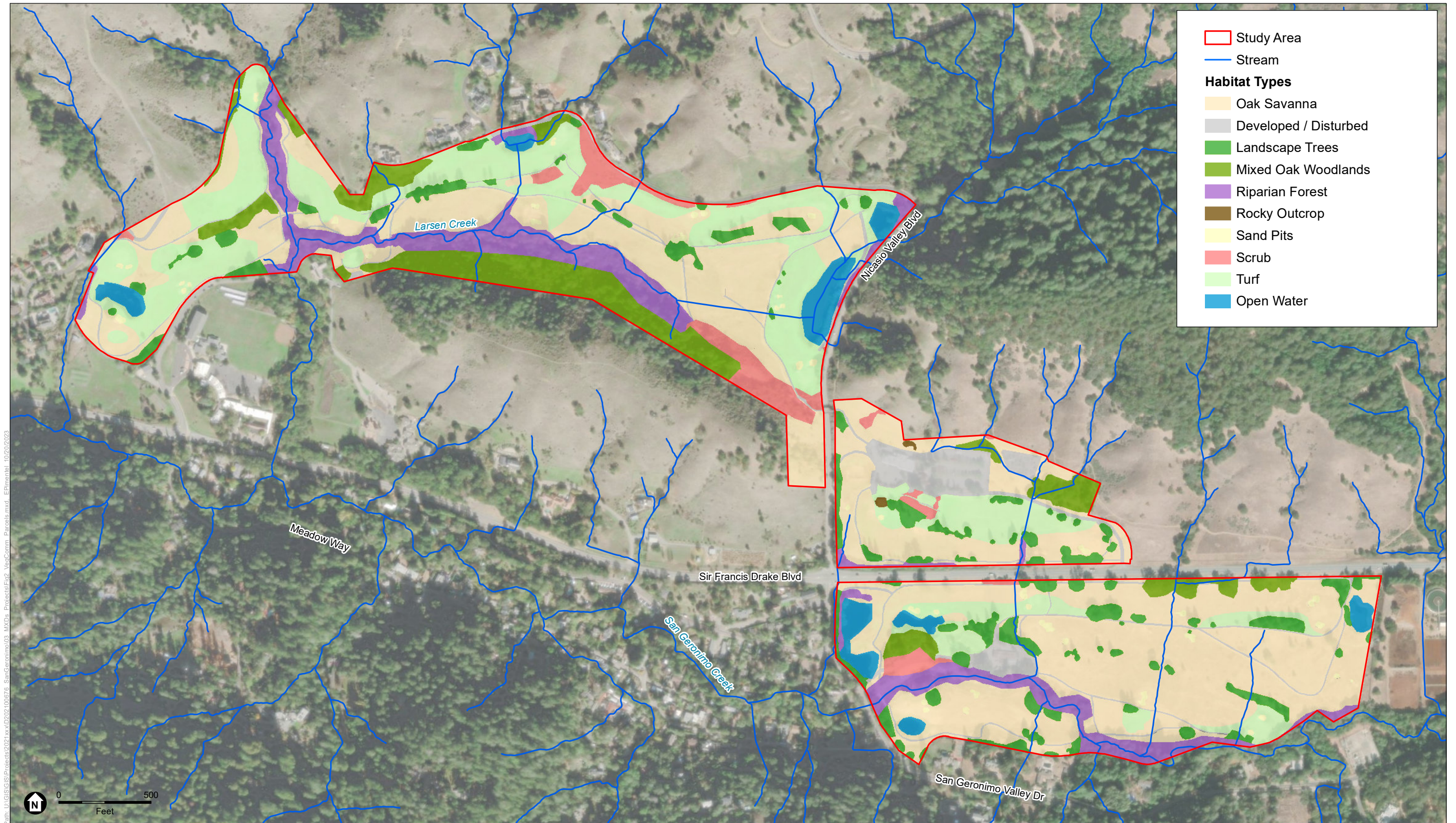
are also present on the Clubhouse Parcel, but this area consists primarily of developed/disturbed lands, including the former clubhouse and parking lot, which would be renovated under the Project, as well as landscape trees, former turf grass, scrubland, rocky outcrops and ornamental plantings (ESA 2021) which are not sensitive natural communities. The oak savanna and mixed oak woodland natural communities on the slopes leading to Roy's Redwoods Preserve, and the riparian forest to the east of the clubhouse, will be completely avoided, as shown in Figure 5 in the Project Description. Figure IV.4-1 shows the natural communities and disturbed areas present on the Clubhouse Parcel.

An intermittent roadside drainage ditch runs parallel to Sir Francis Drake Boulevard on the southern side of the Clubhouse Parcel and supports moderate growth of arroyo willow (*Salix lasiolepis*) and Himalayan blackberry (*Rubus armeniacus*). While the ditch supports riparian vegetation, its patchy distribution and close proximity to a major road limit its habitat function and biological sensitivity. Construction of the proposed front apron and egress driveway connecting the fire station to Sir Francis Drake Boulevard would require permanent removal of approximately 140 feet of the drainage ditch and a small amount of associated riparian vegetation. Mitigation for damage and loss of this sensitive natural community is provided in Mitigation Measure BIO-3 below, which requires minimizing the amount of disturbance and restoring temporarily impacted areas with native species following construction, and adherence to permit requirements for any permanent impacts. Mitigation Measure BIO-4 requires habitat restoration and monitoring of temporarily impacted aquatic habitat to ensure restoration standards are met. Because the Project would culvert a section of this ditch beneath the new fire station front apron and egress driveway, it would require permits from State and federal regulatory agencies. Adherence to the terms of these permits is included in Mitigation Measure BIO-3 below. Implementation of these mitigation measures would reduce potential impacts to riparian habitat to a less-than-significant level.

Mitigation Measure BIO-3 Sensitive Natural Communities

The area of impact to riparian vegetation will be minimized by siting construction staging and access areas outside sensitive natural communities and by utilizing previously disturbed upland areas for staging. Certified weed-free permanent and temporary erosion control measures (e.g., fabric wattles) will be used to minimize erosion and sedimentation during and after construction. Temporary impacts on sensitive natural communities will be restored by revegetation with native species. Revegetated sensitive natural areas will be monitored for a five-year period to ensure success, according to the Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-4.

Any permanently impacted riparian area will be mitigated in accordance with specifications of applicable regulatory agency permits; including compensatory mitigation, if required, with replacement of like habitat on- or off-site, at a 1:1 ratio, or as otherwise specified by applicable resource agency permit(s).



SOURCE: USGS, 2023; ESA, 2023

San Geronimo Valley Fire Station

Figure IV.4-1
Vegetation Communities in the Project Parcels

Mitigation Monitoring Measure BIO-3:

The County will include the provisions of Mitigation Measure BIO-3 in all construction contracts. The County's Project Manager will be responsible for verifying compliance with these conditions.

Revegetated sensitive natural areas will be monitored for a five-year period to ensure success, according to the monitoring requirements described in Mitigation Measure BIO-4.

Mitigation Measure BIO-4 Habitat Restoration and Monitoring

Following project construction, the County will restore sensitive vegetation disturbed during construction, and monitor conditions to ensure that restoration has been successful. Restoration and monitoring will be guided by a qualified biologist experienced in wetland habitat restoration. Restoration will include protocols for replanting of native vegetation removed prior to or during construction, and management and monitoring of the plants to ensure replanting success. The following measures will apply to site restoration:

- Areas impacted from construction-related activity will be replanted or reseeded with locally collected and grown native shrubs and herbaceous species suitable for riparian locations, under guidance from a qualified restoration biologist.
- Monitoring will commence following the completion of restoration activities and will continue annually for five years or until performance criteria are satisfied. Success criteria for monitoring will include:
 - 70 percent survival of planted vegetation; or
 - native herbaceous species in restored areas exceeding 60 percent relative vegetative cover; and,
 - less than 20 percent cover of invasive non-native plants identified on the California Invasive Plant Council (Cal-IPC) High or Moderate lists.

Mitigation Monitoring Measure BIO-4:

The County will contract with a landscaping or restoration firm to complete revegetation and restoration requirements. Revegetation of disturbed areas will occur during the same year in which the disturbance occurred. The County's Project Manager will be responsible for oversight of the contractor and for the post-revegetation monitoring of restored areas.

- c) **Would the Project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Aquatic resources include wetlands and waters potentially subject to Federal regulation under Section 404 of the Clean Water Act (CWA) as well as state of California regulation

under the Porter-Cologne Water Quality Control Act, State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Wetlands Procedures), and California Fish and Game Code (FGC) Section 1602.

The Project site contains two perennial streams, San Geronimo Creek and Larsen Creek (as shown on Figure IV.4-1); the parcels containing these waters would continue to be managed as open space under the Project, as they are now. Restoration of salmonid habitat is ongoing in San Geronimo Creek and is unrelated to the current Project. On the Clubhouse Parcel, two ephemeral streams, likely State waters, flow north-to-south, but no construction will take place in these areas. In the eastern part of the Clubhouse Parcel, a seasonally wet riparian forest would similarly be avoided (see Figure 5 in the Project Description). Downstream, the drainage is partly culverted and flows beneath Sir Francis Drake Blvd. to a connection with San Geronimo Creek; this area is labeled "Existing Wildlife Corridor" on Figure 5 and would not be disturbed. An intermittent roadside drainage in a ditch parallel to Sir Francis Drake Blvd. also drains to San Geronimo Creek via a culvert underneath the road. This ditch may be jurisdictional and considered a water of the U.S. and of the State. Culverting approximately 140 feet of this roadside waterway for construction of the front apron and egress driveway for the fire station would likely require permits from the U.S. Army Corps of Engineers, the San Francisco Regional Water Quality Control Board, and CDFW. If the Project is approved, the County will therefore conduct an aquatic resource delineation (i.e., a wetland delineation) for the area where the fire station facilities would be developed, and obtain permits for impacts to wetlands or waters from the USACE, CDFW and the Regional Water Quality Control Board. These permits would specify the amount of wetland or jurisdictional waters that would be impacted and include conditions for minimizing impacts during construction and restoring temporarily impacted wetlands, and for compensating for permanently impacted wetlands.

During construction, Best Management Practices provided in a Stormwater Pollution Prevention Plan (SWPPP) and, after construction, implementation of a stormwater management system, as described in Section IV.10, Hydrology and Water Quality, would control erosion and prevent impairment of water quality in the creek. This would avoid impacts to water quality and aquatic habitat.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project site comprises four parcels of primarily open space, including two perennial creeks and riparian corridors which serve as critical wildlife corridors for terrestrial and aquatic species, including salmonids, and as nursery sites for spawning and rearing for salmonids. Construction would only occur in the Clubhouse Parcel, which does not provide habitat for these species. The remaining parcels would be designated as open space. Restoration of the San Geronimo Creek corridor for the benefit of salmonids is currently underway independently from the current Project.

The Clubhouse Parcel is regularly traversed by terrestrial wildlife such as mule deer, raccoon, and striped skunk, among many other species, who use this area for foraging and dispersal. Figure 5 in the Project Description illustrates an “Existing Wildlife Corridor” from the riparian forest in the eastern portion of the Clubhouse Parcel south toward San Geronimo Creek. This vegetated wildlife corridor would not be disturbed by the Project. The fire station facilities would be located primarily on disturbed lands, including the former golf course fairways. No known wildlife nursery sites are located in the proposed development area.

While proposed construction of the new fire station facilities would impede wildlife movement in work areas (i.e., within the footprint of the new fire station and accessory buildings, as well as landscaped and hardscaped areas), terrestrial species would be able to avoid the work areas by moving around them and continue using the site during and following Project construction. Large portions of the Clubhouse Parcel and the remainder of the Project site would remain undeveloped and would continue to facilitate wildlife movement, similar to existing conditions. The impact to movement corridors would be of limited duration, and would avoid sensitive areas; thus, the impact is less than significant with no mitigation required.

e) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Marin Countywide Plan (CWP) includes protections for native habitats and biodiversity, including protection of wetlands and riparian zones, sensitive natural communities, wildlife corridors and nursery areas, woodlands and forests. It also promotes control of invasive exotic plants, protection of ecotones (natural transitions between habitat types), stream channels, bird nesting habitat, and coordination with federal and state agencies. The site is within the Marin Countywide Plan’s Inland Rural Corridor, where open space use is promoted. The County would maintain most of the former golf course property as open space, apart from portions of the 22-acre Clubhouse Parcel, which would be used for the new fire station and Fire Department headquarters. Thus, the Project would be consistent with the Inland Rural Corridor provisions.

The CWP Natural Systems and Agriculture Element, Section 2.4, Biological Resources, has provisions for protection of sensitive communities (Policy BIO-1.1, to avoid development in and minimize impacts on sensitive communities, and Policy BIO-2.2 to limit development in areas with sensitive habitat). The Project would adhere to these policies by avoiding disturbance of sensitive habitat and by minimizing or compensating for impacts that cannot be avoided with implementation of Mitigation Measures BIO-3 and BIO-4. CWP Policy BIO-2.5 restricts disturbance in sensitive habitat during nesting season. The Project would not conflict with this policy because Mitigation Measure BIO-1 would protect nesting birds during construction. Policy BIO 3.1 protects wetland areas and establishes Wetland Conservation Area setbacks; the Project may impact wetlands, as discussed under topic c, above, but these impacts would be fully mitigated through implementation of permit conditions.

CWP Policy BIO-4.1 requires a development setback on each side of the top of each streambank in Stream Conservation Areas, which cover land within 100 feet of streams. The site plan for the new fire station facilities (Figure 5 in the Project Description) shows the front apron and egress driveway of the fire station extending outwards from the fire station to Sir Francis Drake Boulevard over the roadside ditch (shown in Figure 5 of the Project Description). This ditch, however, is not a protected stream.¹⁰ Thus, the Project would have no impacts to Stream Conservation Areas.

The San Geronimo Valley Community Plan (SGVCP) includes protections for natural resources (SGVCP Policy ER-1.2) and open space areas (SGVCP Policy ER-1.6), creekside environments (SGVCP Policy ER-2.1), and aquatic habitat (SGVCP Policy ER-2.4) (Marin County 1997). The Project would not conflict with these provisions, because it preserves most of the Project site as open space, does not impact creekside or aquatic habitat, and applies Mitigation Measures BIO-1 through BIO-5 to protect natural resources.

As stated in Countywide Plan Policy BIO-1.3 – Protect Woodlands, Forests, and Tree Removal, and San Geronimo Valley Community Plan Policy ER-1.8, Tree Preservation, the County’s policy is to protect trees, including individual heritage specimens of native tree species, and to mitigate for the loss of trees that cannot be feasibly protected. Approximately eight redwood and valley oak landscape trees would be removed for construction of the fire station, outbuildings and vehicular access routes. Therefore, Mitigation Measure BIO-5 requires the County to replace trees that would be removed for development of the fire station facilities with new tree plantings. With implementation of Mitigation Measure BIO-5, the Project’s impacts with respect to conflicts with local policies or ordinances protecting biological resources would be reduced to a less-than-significant level.

Mitigation Measure BIO-5 Tree Removal

Prior to the start of construction, the County will determine whether any heritage or protected trees are to be removed, using the definitions of heritage and protected trees in County Code Section 22.62. The County will replace any such trees at a 3:1 ratio, with plantings of native trees within the Project site.

Mitigation Monitoring Measure BIO-5

The County will conduct the required tree assessment prior to construction. The County’s Project Manager will be responsible for ensuring that replacement planting requirements are implemented.

¹⁰ The Countywide Plan Glossary defines a “stream” as: “[a] natural or once natural flowing open drainage channel with an established bed and bank. These consist of perennial, intermittent, and ephemeral streams, including open waterways that have been restored, modified, or channelized, but do not include ditches, culverts, or other above- or belowground conduits constructed specifically for storm drainage function. Perennial and intermittent streams, shown as solid or dashed blue lines (or purple lines) on the most recent appropriate USGS data, and ephemeral streams..., are subject to Stream Conservation Area protection policies.”

f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans apply to the Project site. Thus, there would be no impact of this kind.

References

California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Data Base. Rarefind database for San Geronimo, Bolinas, Inverness, San Rafael, Petaluma, Petaluma River, Point Reyes NE, and Novato. 7.5-minute U.S. Geological Survey (USGS) quadrangles.

California Native Plant Society (CNPS). 2023. California Rare Plant Ranking Inventory of Rare and Endangered Plants for San Geronimo and surrounding USGS 7.5-minute quadrangles. Sacramento, CA. <http://www.rareplants.cnps.org/>

ESA, 2021. 5800 Sir Francis Drake Blvd (San Geronimo) Biological Constraints. In: Sicular Environmental Consulting and Natural Lands Management, 2021.

Google Earth, 2023. Aerial maps of the study area, available online.

Marin County. 1997. San Geronimo Valley Community Plan. Adopted by the Marin County Board of Supervisors, December 2, 1997.

Marin County, 2007. Marin Countywide Plan. Prepared by the Marin County Community Development Agency and adopted by the Board of Supervisors, November 6, 2007.

Marin County, 2022. Stream Conservation Area for the San Geronimo Valley Fact Sheet. October. https://www.marincounty.org/-/media/files/departments/cd/planning/sca/san-geronimo-valley/sqvfactsheet_122022.pdf

Podlech, Mike, 2021. San Geronimo Golf Course Fisheries Constraints Analysis. In: Sicular Environmental Consulting and Natural Lands Management, 2021

Sicular Environmental Consulting and Natural Lands Management, 2021. San Geronimo Golf Course Clubhouse Parcel Environmental Constraints Analysis. Prepared for Marin County Fire Department. October 2021.

Turtle Island Restoration Network, 2022. Smolt Monitoring Update on San Geronimo Creek. <https://seaturtles.org/smolt-monitoring-update-on-san-geronimo-creek/> May 24, 2022.

U.S. Fish and Wildlife Service (USFWS). 2023. iPac, USFWS Information for Planning and Consultation online system. Official Species List. June.
<https://ecos.fws.gov/ipac/>

US Geological Survey, 2023. National Hydrography Dataset.
<https://www.usgs.gov/national-hydrography/national-hydrography-dataset>
Accessed October 20, 2023.

5. Cultural Resources

<i>Would the project:</i>		Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA <i>Guidelines</i> §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA <i>Guidelines</i> §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA *Guidelines* Section 15064.5?

The State CEQA *Guidelines* Section 15064.5 details the measures for the evaluation and protection of cultural resources in a CEQA document. “Historical resources” are those cultural resources that are: (1) listed in or eligible for listing in the California Register of Historical Resources; (2) listed in a local register of historical resources (3) identified as significant in a historical resource survey meeting the requirements of Public Resources Code §5024.1(g); or (4) determined to be a historical resource by a project’s lead agency. The Guidelines further state that “A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.”

Criteria for listing in the California Register of Historical Resources include the following:

Criterion 1: Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

Criterion 2: Associated with the lives of persons important to local, California or national history.

Criterion 3: Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values.

Criterion 4: Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

A Historical Resources Evaluation Report was prepared as part of the Environmental Constraints Analysis that evaluated the potential historical significance of the former San Geronimo National Golf Course and clubhouse (Brewster, 2021). The report found that neither the golf course itself, nor the clubhouse, is currently listed in the California Register of Historical Resources or in a local register of historical resources. The report found that, while the former golf course and associated clubhouse meet the minimum age threshold for eligibility (45 years), neither facility is eligible for listing in the California Register of Historical Resources because they do not meet any of the criteria required for a finding of individual historic significance. As neither the former golf course landscape nor the clubhouse building would meet the definition of a 'historical resource,' their future use, development, or alteration would not be a significant environmental impact.

The Project includes no other physical alteration of the Project site. It is, however, a reasonably foreseeable consequence of the Project that the County may alter or demolish other buildings within the Project site. Other buildings, all located on Parcel 172-372-14 near San Geronimo Creek, include a single-story maintenance building, an equipment storage barn, a caretaker's cottage, and a bathroom facility.

The maintenance building has an area of approximately 4,669 square feet and is partitioned into two main areas. The equipment storage barn is an open metal and wood structure containing approximately 1,784 square feet (Nova Partners, 2017). The caretaker's cottage is an approximately 1,000 square foot, two-story structure with a simple gable roof and wood siding, a back deck, and exterior stairway. It is in poor condition, having been damaged by a falling tree limb in a recent storm. There is a restroom facility that served golfers, located between the cottage and the maintenance building, which is of recent origin and does not have the potential to be an historic resource. Currently, a chain link fence blocks public access to the buildings (Figure IV.1-2 in Section IV.1, Aesthetics).

The maintenance building, and perhaps also the equipment storage barn, may pre-date the golf course, as historic aerial photographs and topographic maps show structures in this location prior to golf course development in the mid-1960s (Amicus, 2017). The caretaker's cottage appears to be of more recent construction and may have been built when the golf course was developed. While all three buildings appear to be of sufficient age to qualify as potentially historic resources, nothing indicates that any of them would meet the criteria for listing in the California Register of Historical Resources. A historic resources evaluation has not, however, been performed for these structures, and it is therefore possible that one or more of them could be found to be an historic resource. If so, future alteration or demolition of the structures, if such were undertaken by the County, could constitute a significant impact. Mitigation Measure CUL-1 is added to ensure that impacts to historic resources would be avoided.

Mitigation Measure CUL-1

- a. Historic Resources Evaluation. Prior to the County undertaking any demolition, destruction, relocation, or alteration of the maintenance building, equipment storage barn, or caretaker's cottage, the County shall conduct an historic resources evaluation to; 1) determine whether any of the structures would qualify as an historic resource eligible for listing on the California Register of Historic Resources, and 2) whether the proposed action would materially impair the significance of any identified historic resources. The evaluation will be conducted by a qualified architectural historian who meets the Secretary of the Interior's Standards for architectural history.
- b. If the historic resources evaluation specified above finds that the proposed action would not materially impair the significance of any identified historic resource, the action may proceed. If the action would materially impair the significance of any identified historic resource, the action will not proceed, until it is revised to be consistent with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*, as determined by a qualified architectural historian.

Mitigation Monitoring Measure CUL-1:

The Director of Marin County Parks will be responsible for ensuring that the mitigation measure is implemented prior to any demolition, destruction, relocation, or alteration of any of the three buildings in Parcel 172-372-14.

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5?

An archaeological resources study was conducted for the Clubhouse Parcel and surrounding areas as part of the Environmental Constraints Analysis (Paleowest, 2021). The archeological study consisted of a records search covering the entire Project site, and a field survey of the Clubhouse parcel. The records search was performed on July 14, 2021 at the California Historical Resources Information System, Northwest Information Center (NWIC) at Sonoma State University. The records search included the Clubhouse Parcel and a surrounding half-mile radius area. Results of the NWIC search indicated that 26 previous cultural resources studies had been conducted within the records search area, but no cultural resource investigations had previously been undertaken within the Clubhouse Parcel. Five archaeological resources had been previously documented within the records search area. Although none of these previously recorded resources are within the Clubhouse parcel, several prehistoric and historic-era sites have been documented within the larger Project site along San Geronimo Creek.

The archaeological study also included an intensive-level pedestrian survey of the Clubhouse Parcel, conducted on July 22, 2021. No new prehistoric or historic archaeological materials were identified as a result of this survey. Despite the negative

results of the records search and field survey, the archaeological study concluded that the Clubhouse Parcel is moderately sensitive for containing buried archaeological resources because of the parcel's proximity to San Geronimo Creek and the prehistoric and historic-era archaeological deposits that have been recorded nearby.

Archaeological resources could be inadvertently encountered, damaged, or destroyed during site preparation for development of the new fire station and related facilities, potentially resulting in a significant impact per State CEQA *Guidelines* Section 15064.5(c). Therefore, Mitigation Measures CUL-2 and CUL-3 are identified to reduce the potential for inadvertent discovery of previously unrecorded archaeological resources to less than significant.

Mitigation Measure CUL-2: Cultural Resources Sensitivity Training

A cultural resource sensitivity training led by a Secretary of the Interior-qualified archaeologist shall be conducted for all construction personnel prior to any ground-disturbing activities. A representative from a local Tribal organization shall be invited to participate in this training. The training program will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located in the Project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The training program will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans.

Mitigation Monitoring Measure CUL-2

The County's Project Manager for construction of the new fire station and related facilities will be responsible for ensuring the implementation of Mitigation Measure CUL-2, and will submit a copy of the outline of the training to the Marin County Community Development Agency prior to the scheduled training session.

Mitigation Measure CUL-3: Inadvertent Discovery of Cultural Resources

If pre-contact or historic-era archaeological resources are encountered during Project implementation, all construction activities within 100 feet shall halt, and a Secretary of the Interior-qualified archaeologist shall inspect the find within 24 hours of discovery and notify the County of their initial assessment. If the find is deemed pre-contact, a Native American Heritage Commission (NAHC)-listed Tribe will be invited to evaluate the find. Pre-contact archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as

hammerstones and pitted stones. Historic-era materials might include building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse.

If the County determines, based on recommendations from a Secretary of the Interior-qualified archaeologist and a NAHC-listed Tribe (if the resource is Native American related), that the resource may qualify as a historical resource or unique archaeological resource (defined in State CEQA *Guidelines* Section 15064.5) or a tribal cultural resource (defined in PRC Section 21080.3), the resource shall be avoided, if feasible. This may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.

If avoidance is not feasible, the County shall work with a Secretary of the Interior-qualified archaeologist and a NAHC-listed Tribe (if the resource is Native American-related) to determine treatment measures to avoid, minimize, or mitigate any potential impacts or adverse effects to the resource. This shall include documentation of the resource and may include data recovery, if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource.

Mitigation Monitoring Measure CUL-3

The County's Project Manager for construction of the new fire station and related facilities will be responsible for ensuring the implementation of Mitigation Measure CUL-3, and will report any accidental discovery of potential cultural resources to the Marin County Community Development Agency immediately.

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Ground disturbing activities associated with site preparation, grading, and construction activities could also disturb human remains, including those interred outside of formal cemeteries. The potential to uncover Native American human remains exists in locations throughout California. Given the relative proximity of three previously recorded precontact archaeological sites and the environmental context of the Project site, there is the potential for accidental discovery of human remains during Project construction. If not properly treated, this could result in a significant impact.

Section 7050.5(b) of the California Health and Safety code requires certain procedures to be implemented if human remains, or possible human remains, are discovered. Section 7050.5(b) states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are

discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

The County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission (NAHC) within 24 hours. The Commission has various powers and duties, including the appointment of a Most Likely Descendant (MLD) to the Project. The MLD, or in lieu of the MLD, the NAHC, has the responsibility to provide guidance as to the ultimate disposition of any Native American remains.

With adherence to Section 7050.5(b) of the California Health and Safety code, the potential for the disturbance of human remains during Project construction would be less than significant. However, to ensure compliance with Section 7050.5(b), and therefore to ensure that the potential impact is adequately mitigated, Mitigation Measure CUL-4 is added.

Mitigation Measure CUL-4: Training for Accidental Discovery of Human Remains.

The archaeological training specified in Mitigation Measure CUL-2 shall include training on identification of human remains or potential human remains, and on the procedures to follow in the event of such discovery.

Mitigation Monitoring Measure CUL-4:

See Mitigation Monitoring Measure CUL-2.

References

Amicus – Strategic Environmental Consulting, (Amicus) 2017. Phase 1 Environmental Site Assessment. San Geronimo Golf Course Project Property., 5800 Sir Francis Drake Boulevard, San Geronimo, California. Prepared for the Trust for Public Lands. October 18, 2017.

Brewster Historic Preservation, 2021. Historic Resources Evaluation Report, 5800 Sir Francis Drake Boulevard, San Geronimo, California. In: Sicular Environmental Consulting, 2021.

Nova Partners, 2017. San Geronimo Golf Course Site Observations Report. Prepared for Trust for Public Land. October 26, 2017

PaleoWest, LLC, 2021 Archaeological Resources Constraints Analysis for the San Geronimo Golf Course Project, Marin County, California. Prepared for Sicular Environmental Consulting and Natural Lands Management. Technical Report No. 21-442. August 13, 2021

Sicular Environmental Consulting and Natural Lands Management (SEC), 2021. San Geronimo Golf Course Clubhouse Parcel: Environmental Constraints Analysis. Prepared for Marin County Fire Department, October 2021.

6. Energy

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

The Project would use energy during both construction and operation. During construction, energy use would be primarily in the form of electricity and diesel fuel required to power a variety of construction equipment, as well as gasoline associated with construction workers' vehicle trips to and from the Project site. The CalEEMod emissions model, which was used to estimate Project air emissions, was also used to estimate Project energy use during construction (Appendix B, CalEEMod Model Run; U.S. Energy Information Administration, 2016). Estimated liquid fuel use during construction would be 55,627 gallons of diesel fuel and 2,538 gallons of gasoline.

Operation of the new fire station site would use energy in the form of electricity and liquid fuels. Liquid fuels would be used by fire engines, and other emergency vehicles, mobile equipment, and emergency backup generators, as well as by employees commuting to and from work. As many of the functions and activities currently located at the Woodacre fire station would be relocated to the new fire station, the energy used at the new fire station would be offset by a reduction in use at the old station. Because the new fire station would be in a more central location with better access to the major roads in the San Geronimo Valley, fuel consumption by emergency vehicles would be expected to decrease slightly from the current condition. Fuel consumption for employee commute trips would remain about the same, as discussed in Section IV.16, Transportation.

New and remodeled construction would be required to comply with Marin County Building Code standards, and for this Project, also with the special Essential Services Building standards established by the State of California. The buildings would therefore be required to meet the minimum standards of the Marin County Green Building Code (Title 19 Marin County Building Code, Subchapter 2 – Green Building) and California Title 24 (CALGreen). The Green Building Code was last updated in 2022. The Green Building Requirements include energy efficiency standards that would minimize energy

use in the buildings, ensuring that they do not use energy wastefully. It is likely that the new fire station buildings will be substantially more energy efficient than the existing buildings at the Woodacre station. Furthermore, the Green Building Code prohibits use of natural gas appliances in new construction in most instances, meaning that most development in the County is required to be “all electric,” an inherently efficient energy type that can, furthermore, be generated from renewable sources, such as the sun.

A limited amount of energy would be used for Project construction, which, because the Project would be providing new, state-of-the-art emergency response facilities, is not considered wasteful. Operation of new and remodeled facilities would likely use less energy than the current Woodacre fire station and Fire Department headquarters, as they would be built to comply with energy efficiency requirements. This impact would therefore be less than significant.

b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Marin County’s Green Building Code and the state-wide CALGreen Building Code are the primary local and state plans and policies on renewable energy and energy efficiency that apply to the Project’s proposed new and remodeled buildings. Compliance with the Building Code would be required for the Project.

The Marin County Climate Action Plan 2030 (Marin County, 2020) contains policies and programs to achieve numerical targets for greenhouse gas (GHG) reduction consistent with the Statewide goal, established by Senate Bill 32 of 2016, to reduce emissions 40 percent below 1990 levels by 2030. Strategies for achieving the targeted GHG reductions include many measures related to energy efficiency and renewable energy, including increasing use of zero emission vehicles, greater reliance on human-powered and public transit, increasing renewable energy generation including rooftop solar, waste reduction strategies, water conservation strategies, greater use of low-embodied emissions building materials, and others. Many provisions of CALGreen and the Marin County Green Building Code are consistent with and serve to implement Climate Action Plan 2030 strategies, such as requiring advanced energy efficient design and construction and use of on-site renewable energy generation.

Given that the Project would comply with State and local Green Building Codes, and therefore would be consist with Climate Action Plan 2030, the Project would have no impact with regard to conflicting with or obstructing a State or local plan for renewable energy or energy efficiency.

References

Marin County, 2020. Climate Action Plan 2030. Adopted by the Board of Supervisors December 2020. Available at:
<https://www.marincounty.org/depts/cd/divisions/sustainability/climate-and-adaptation>.

U.S. Energy Information Administration, 2016. Carbon Dioxide Emissions Coefficients.
February 2, 2016. https://www.eia.gov/environment/emissions/co2_vol_mass.php

7. Geology and Soils

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduction

San Geronimo Valley is an east-west structural depression with a base elevation of about 340 feet above mean sea level (amsl) flanked on the north and south by hills and ridges with elevations approaching 1,100 feet amsl. The uplands flanking the valley are

underlain by Franciscan Formation *mélange*¹¹ mantled by colluvium¹² that, in some sloped locations, has failed as landslides. Quaternary-age¹³ alluvium¹⁴ covers the valley floor and is underlain by Franciscan *mélange* at varying depths. Although the alluvial deposits are on low to moderate slopes near the valley floor, it can be unstable and prone to small slope failures along stream banks (Rice, et al, 1976).

The Project site is covered by Quaternary-age alluvium underlain by Franciscan *mélange*. Depths of alluvium are shallow, as evidenced by areas of outcropping bedrock in the upper portions of the Project site and by soil borings drilled adjacent to San Geronimo Creek on parcel 172-372-14, which encountered bedrock at 12 feet below ground surface (RWQCB, 2000). While outcropping Franciscan bedrock is common in the San Geronimo Valley, the *mélange* outcrop below the former clubhouse was historically incorporated into the golf course landscape and can be considered a unique geologic feature and local landmark.

- a) **Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

There are no active faults¹⁵ mapped within the San Geronimo Valley. The closest active fault zone delineated by the Alquist-Priolo Earthquake Fault Zoning Act is the San Andreas Fault Zone, located 4 miles to the southwest. The absence of active faults means that there is no risk of surface fault rupture. Several pre-Quaternary faults have been identified and mapped in the uplands that flank San Geronimo Valley. Pre-Quaternary faults are those that show displacement before Quaternary time (i.e., more than 1.6 million years ago). These faults are not considered active or capable of generating an earthquake, but they are not necessarily inactive (Jennings and Bryant,

¹¹ *Mélange* represents a disrupted assemblage of large and small masses of various hard rock materials such as sandstone, shale, greenstone, chert, and serpentine embedded in a fine-grained matrix of intensely sheared and crushed rock. This combination of disrupted rock masses and sheared matrix represents one or more ancient fault zones. The low strength of the fine-grained matrix of *mélange* is a major factor contributing to landsliding.

¹² Colluvium is any loose, heterogeneous, and incoherent mass of soil material and/or rock fragments deposited by rain wash, sheetwash or slow downhill creep, usually collecting at the base of gentle slopes or hillsides.

¹³ The Quaternary Period began 1.6 million years ago.

¹⁴ Quaternary-aged alluvium deposits are typically well compacted and unconsolidated mixtures of clay, silt, sand, and gravel.

¹⁵ Active Earthquake faults that are delineated under the Alquist-Priolo Earthquake Fault Zoning Act are typically considered “sufficiently active” and “well-defined” and have experienced displacement within Holocene time (about the last 11,000 years) (Bryant and Hart, 2007).

2010). Generally, pre-Quaternary faulting does not present a seismic risk. The impact of surface fault rupture would therefore be less than significant.

ii) Strong seismic ground shaking?

Marin County will likely experience ground shaking from a major regional earthquake during the life of the Project. The 2014 Working Group on California Earthquake Probabilities concluded from its updated 30-year earthquake forecast for California that there is a 72-percent probability of at least one earthquake of magnitude 6.7 or greater occurring somewhere in the San Francisco Bay region before 2043 (USGS, 2016). The San Andreas and other regional faults, including the San Gregorio, Hayward-Rodgers Creek, West Napa, and Calaveras faults could generate strong to violent ground shaking in San Geronimo Valley and at the Project site (RGH, 2023). The Project site would most likely be affected by ground shaking from earthquakes on the San Andreas fault (4 miles southwest) and the Hayward-Rodgers Creek fault (16 miles northeast). There is a 22 percent chance of a magnitude 6.7 earthquake occurring between now and 2043 on the San Andreas fault and a 33 percent chance on the Hayward-Rodgers Creek fault (USGS, 2016).

Geographical Information System (GIS) mapping of Marin County includes the Project site in a zone described as “some ground shaking amplification” while the adjacent hills are considered areas of “least ground shaking amplification” (MarinMap, 2023). These categories primarily reflect the underlying geologic materials. Depending on the distance to the causative fault and magnitude of the earthquake, the alluvium, colluvium, and bedrock underlying the Project site would not excessively amplify seismic waves propagated during an earthquake. The areas of least ground shaking amplification occur in the uplands that flank the valley where bedrock is closer to the surface or exposed; bedrock tends to attenuate seismic waves.

The following discussion on ground shaking hazards focuses on the fire station, training center, administrative offices, and associated facilities proposed on the Clubhouse Parcel (parcel 172-371-04). Unless constructed to resist seismic forces, these new facilities could directly or indirectly increase the risk of loss, injury, or death involving ground shaking during an earthquake. Since the Project proposes no development on parcels 168-250-41, 172-372-01, and 172-372-14, earthquake ground shaking would affect these parcels as it would under existing baseline conditions, and thus ground shaking hazards on these parcels are not discussed further.

Structural damage in built structures and injury to occupants during an earthquake are inherent risks in seismically active regions like Marin County. Ground shaking could cause some structural damage and possibly injure those working at or visiting the proposed fire station and facilities. However, the proposed fire station and facilities would be considered Essential Services Buildings by the State of California under the Essential Services Buildings Seismic Safety Act of 1986 (ESBSSA)¹⁶ (see Project

¹⁶ California Health and Safety Code, Chapter 2, sections 16000 through 16022.

Description).¹⁷ In accordance with the ESBSSA, Essential Services Buildings should be capable of providing emergency services to the public after a disaster and must be designed and constructed to resist earthquake ground shaking. The ESBSSA requires use of a current seismic hazard assessment and up-to-date ground motion data to determine the earthquake forces a structure must be designed to withstand. The seismic design criteria established under the ESBSSA are based on several factors including expected ground motion, soil conditions, depth to bedrock, and distance from causative faults. The ESBSSA also addresses the resiliency of associated water supply, power, and communication systems, ensuring they would operate following an earthquake. In addition, the California Building Code¹⁸ defines how the intent of the ESBSSA is to be implemented in Title 24, the California Building Standards Administrative Code. Enforcement responsibility of the ESBSSA is that of the local building jurisdiction (i.e., Marin County) for locally owned or leased facilities and the California Division of the State Architect (DSA) for state owned or leased facilities. However, the duties and responsibilities of the DSA include observing the implementation and administration of the Act's provisions for all, which includes providing advice and assistance to local jurisdictions regarding Essential Services Buildings.

While earthquake ground shaking would be felt at the Project site, the building design criteria mandated by the ESBSSA and the California Building Code, in combination with Marin County building design and construction code enforcement and DSA oversight, would ensure that the risk of structural damage or collapse and injury to personnel and visitors during an earthquake would be greatly reduced or eliminated. Furthermore, compliance with seismic design requirements prescribed by the ESBSSA would ensure that the proposed fire station and ancillary facilities would remain operational after a major regional earthquake. This impact would therefore be less than significant.

ii) Seismic-related ground failure, including liquefaction?

Liquefaction occurs when saturated sandy or gravelly materials become liquified due to ground shaking during an earthquake. Liquefaction causes a material to lose bearing strength and can cause differential settlement and consolidation, which can damage structures and utilities. The majority of the Project site is categorized as a zone of moderate liquefaction potential (MarinMap, 2023). The uplands areas in parcel 168-250-41, where there are less surficial soils and a greater abundance of exposed bedrock, are mapped as having very low liquefaction potential. Liquefaction may occur on the Project site during a major earthquake but because of the presence shallow alluvium and

¹⁷ The definition of Essential Services Buildings also includes buildings or portions of buildings used for police stations, emergency operations centers, California Highway Patrol offices, sheriff's offices, or emergency communication dispatch centers.

¹⁸ The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards.

colluvium overlying bedrock, it would likely be limited to localized saturated granular sediments found along creeks and in areas of deeper alluvial deposits.

If liquefaction did occur during an earthquake, it could trigger related ground failures (i.e., lateral spreading¹⁹, lurching²⁰, earthquake induced settlement²¹, cyclic densification²²), which could cause structural damage capable of injuring site personnel or visitors. This would be the case with the Clubhouse Parcel, because development is proposed on that parcel. Liquefaction could occur on parcels 168-250-41, 172-372-01, and 172-372-14 but because the Project does not propose development on those parcels, liquefaction would occur as it would under existing baseline conditions, with or without the Project, and the risk of injury or property damage would be low.

In accordance with County building code requirements, and in order to obtain subsurface data necessary for compliance with the ESBSSA and adequate foundation design, future development on the Clubhouse Parcel would require a comprehensive, design-level geotechnical evaluation prior to final design and construction. The geotechnical evaluation would identify liquefaction hazard potential on the parcel and identify areas where the ground could fail due to liquefaction. If liquefaction hazards are present, the geotechnical engineer would recommend standard, industry-accepted geotechnical engineering strategies that would either remove and replace the liquefiable problematic soils or incorporate geotechnical design elements to minimize or eliminate adverse effects of soil failure. If deemed necessary, remedial methods could include removal of problematic soils and replacement with competent fill, installation of vertical foundation piles that are founded in deeper, non-liquifiable materials, or soils stabilization through in-situ soil improvement techniques (e.g., in-situ densification using vibro-compaction or compaction grouting) (CGS, 2008). While liquefiable soils could cause liquefaction ground failures at the Project site, specifically on the Clubhouse Parcel, they can be identified and reduced or eliminated through standard geotechnical remedies and thus, this impact is less than significant.

iv) Landslides?

A landslide is a general term for the down-slope movement of soil or rock under gravitational forces in response to earthquake ground shaking or static (non-earthquake) forces. A landslide can happen suddenly or more slowly over a long period of time. When the force of gravity acting on a slope exceeds the resisting forces, the slope will fail, and a landslide occurs. Landslides can take various forms from shallow debris flows that occur in the upper few feet of materials covering a slope to deep seated rotational

¹⁹ Lateral spreading is horizontal movement of gently sloping ground (less than 5% surface slope) due to liquefaction in underlying, saturated soils.

²⁰ Steep slopes underlain by soft soils can deform laterally or lurch during an earthquake, leading to cracking and slope failure.

²¹ Settlement during ground shaking is caused by dissipation of excess pore water pressure that produces consolidation within the soil and is exhibited at the ground surface as settlement.

²² Seismically induced compaction or densification of non-saturated sand or silt above the groundwater table due to earthquake vibrations may cause settlement.

movement that can displace large volumes of rock or soil. Slope failures common in the vicinity of the Project site include shallow debris flows and slumps.²³

Previous landslide mapping of the Project site and vicinity indicates that the majority of slope instability is present in the upland areas north and offsite of the Clubhouse Parcel and on either side of parcel 168-250-41 (MarinMap, 2023, Rice, et al., 1976). These areas are noted as “mostly landslides” in the MarinMap database because this area is characterized by steep slopes. The Clubhouse Parcel is underlain by surficial deposits with a low risk of landslides (MarinMap, 2023).

In its 1976 mapping effort, the CGS assigned the areas occupied by parcels 172-372-01 and 172-372-14 and the majority of the Clubhouse Parcel to stability Zone 1, which is the most stable category (Rice, et.al, 1976). Conditions in Zone 1 include resistant rock that is either exposed or is covered only by shallow colluvium or soil. Zone 1 slope stability areas can be on flat ridge tops or, as in the case of parcels 172-372-01, 172-372-14, and the Clubhouse Parcel, in valley bottoms underlain by weaker material such as the Franciscan *mélange* (Rice, et.al, 1976). However, evidence of localized slope instability in Zone 1 was noted along the stream banks of San Geronimo Creek where bank undercutting could result in minor, localized failures in the form of small landslides or soil slumps. The slopes north of the Clubhouse Parcel and those in the uppermost (northwestern) corner are assigned Zones 3 and 4 (Rice, et.al, 1976). Slope stability in Zone 3 is defined as areas where the slope approaches the stability limits of the underlying materials. This zone also includes landslide deposits that are in relatively more stable positions. Zone 4 is the least stable category and includes landslide deposits in upslope areas whether presently active or not and where there is substantial evidence of downslope creep of surface materials. These areas should be considered unstable and subject to failure even in the absence of human activities or influences.

Evidence of slope instability exhibited as debris flows is present on the steeper slopes along the northwest and northeast property boundaries of the Clubhouse Parcel. A review of aerial photography completed in 2021 identified two shallow soil debris flow on the steeper slopes north of the property line (SEC, 2021). In general, the base of the slopes to the north align with the northern boundary line of the parcel and any previous instability on these slopes have not adversely affected the Project site. A recent preliminary geotechnical study completed for the Project site mapped a debris flow just offsite and northeast of the Clubhouse Parcel. This flow was described as a recent debris flow and there is no evidence that it adversely impacted the Clubhouse Parcel (RGH, 2023).

The following discussion of landslides focuses on the Clubhouse Parcel because that is the only parcel slated for development. Although there are steeper slopes elsewhere on the Project site (i.e., parcel 168-250-41) that could be subjected to failure and landslides, instability on these slopes would occur as they would under existing baseline conditions,

²³ Slumps are small, localized failures that typically occur along creek beds, water saturated naïve slopes and over-steepened cut slopes.

with or without the Project, and would not increase the human risk of landslide hazards nor damage to new structures proposed under the Project.

The Clubhouse Parcel slopes gradually to the southwest and is not susceptible to landsliding or slumping. However, the steeper slopes north of the parcel and those in the uppermost northwest corner could present a geotechnical challenge if Project grading encroached into the base of these slopes, possibly leading to immediate or future slope failure. The proposed fire station, training center, and ancillary facilities would be constructed in the central portion of the parcel allowing an adequate buffer between the development and the steeper slopes to the north. The facilities would be constructed in an area considered stable and not susceptible to landsliding. Additionally, the existing clubhouse would be renovated within its existing footprint and would not require grading that encroaches into the slopes to the north. Considering this, the potential for the Project to cause slope instability that exposes facility personnel and visitors to risks associated with landsliding is low, and therefore this impact is less than significant.

b) Would the Project result in substantial soil erosion or the loss of topsoil?

The discussion on erosion and loss of topsoil presented below applies to the Clubhouse Parcel specifically because development is proposed in that parcel that could cause erosion during construction and after the Project is complete. The other parcels included in the Project site (172-372-01, 172-372-14 and 168-250-41 would remain in their existing state and erosion and topsoil loss would occur naturally as they would under existing baseline conditions, not influenced by actions proposed under the Project.

Temporary erosion of surface soils and fill stockpiles is possible during the construction phase of the Project when soil is disturbed and exposed to precipitation. However, under the Construction General Permit (CGP) (discussed in detail in Section IV.10, Hydrology and Water Quality), the permit applicant or their contractor(s) would implement stormwater controls [(aka Best Management Practices (BMPs))], as set forth in a detailed Stormwater Pollution Prevention Plan (SWPPP). SWPPPs must describe the specific erosion control and stormwater quality BMPs needed to reduce erosion and minimize pollutants in stormwater runoff with adequate details of their placement and proper installation. Under the CGP, there is a low potential that the proposed development area within the Clubhouse Parcel would be impacted by a substantial degree of erosion. Post-construction, the area developed with the new fire station facilities would be occupied by buildings and hardscape (concrete and asphalt), which would not leave soil exposed to erosion, except those in actively managed and properly drained landscaped and garden areas. Given that erosion would be adequately managed under the CGP during construction and that Project site improvements would convert the development areas in the Clubhouse Parcel to hardscape and managed landscaping, the potential for the Project to contribute to substantial erosion or loss of topsoil is low and therefore, this impact is less than significant.

- c) Would the Project be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

The geologic stability of the Project site in regard to seismic ground shaking, liquefaction ground failure, and landsliding is discussed above under Topics a.ii, a.iii, and a.iv, respectively. The Project site is underlain by Franciscan Formation mélangé and the CGS has mapped the area of the proposed fire station and associated facilities within the Clubhouse Parcel as Zone 1, which is the most stable category (Rice, et.al, 1976). Conditions in Zone 1 include resistant rock that is either exposed or is covered only by shallow colluvium or soil. The proposed development of the fire station, fire training center and ancillary facilities would not reduce the inherent geologic stability of the Clubhouse Parcel and would not exacerbate the effects of ground shaking, increase the potential for liquefaction ground failure, or contribute to instability of slopes susceptible to landsliding. No development is proposed within the remainder of the Project site, which would remain as open space in its existing condition and degree of geologic stability. This impact is therefore less than significant.

- d) Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?**

There is a low to moderate potential to encounter expansive soils on the Clubhouse Parcel, which is the proposed location of the fire station and fire training center (MarinMap, 2023). However, the design-level geotechnical investigation, which is required by the County under the Building Code and necessary to comply with seismic design requirements under the ESBSSA, would sample and analyze Project site soils to determine expansive potential. If expansive soils are identified, standard geotechnical recommendations would be provided to reduce or eliminate their potential long term adverse effects. Expansive soils elsewhere on the Project site (parcels 172-372-01, 172-372-14 and 168-250-41) where improvements are not proposed are of little consequence as expansive soil would behave as it would under existing baseline conditions, with or without the Project, and would not create substantial risks to life or property. This impact is therefore less than significant.

- e) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

The San Geronimo Valley is unique in that septic systems are required for residents and businesses, but the subsurface materials may not be conducive at a particular site, especially on the floor of the valley where groundwater may rise seasonally (Rice et.al, 1976). The Clubhouse Parcel, which would contain the proposed fire station, fire training center, and ancillary facilities, is several feet above the valley floor on a slope underlain by unconsolidated alluvium. There has been a County-approved, operating septic system on this parcel for many years that supported the golf course clubhouse. The

evidence, therefore, suggests that the soils underlying the Clubhouse Parcel are suitable to support a septic system and a leachfield. However, because the proposed facilities would serve a greater number of people for longer periods, an upgrade and expansion of the existing septic and leachfield system would likely be required. Furthermore, site investigations indicate the feasibility of an expanded or new septic system to serve the proposed development of the fire station (Adobe Associates, Inc., 2023).

An existing septic tank and leachfield system is connected to the caretaker's cottage on parcel 172-372-14. The caretaker's cottage was damaged by a falling tree limb in a storm and the cottage itself, as well as the septic system, are currently unused. Parcels 172-372-01 and 168-250-41 do not contain active or inactive septic systems.

Considering that a septic and leachfield wastewater disposal system has operated successfully on the Clubhouse Parcel for decades and supplemental site investigations indicate the feasibility of an expanded or new system of similar design, it follows that the Clubhouse Parcel does have adequate soil conditions to support leachfield disposal and therefore, this impact is less than significant.

f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources are the fossilized evidence of past life found in the geologic record and can include vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), and fossils of microscopic plants and animals (microfossils). The age and abundance of fossils depend on the location, topographic setting, and the particular geologic formation in which they are found. Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the earth's surface. The potential that fossil remains would be found in Franciscan mélange is low to remote because these ancient rocks have been tectonically altered and pervasively disrupted deep within ancient fault zones. The potential that fossil remains are present in the alluvium overlying the bedrock would be equally remote as these deposits are geologically too young. Impacts associated with the destruction of paleontological resources are therefore less than significant.

The outcropping bedrock located within the landscape area of the clubhouse is considered a unique geological feature, even though outcrops of Franciscan mélange are prevalent throughout the San Geronimo Valley, including elsewhere on the Project site. This outcropping was incorporated into the landscape of the original golf course clubhouse and has been a landmark in the valley at least since 1965. The existing clubhouse would be renovated within its existing footprint and the area around the bedrock outcrop would remain undisturbed during construction grading and throughout operations of the proposed fire station and training center facility. No other unique geologic features have been identified on parcels 172-372-01, 172-372-14, or 168-250-41. Therefore, impacts associated with the destruction of unique geologic features would be less than significant.

References

- Adobe Associates, Inc., 2023. Percolation Test Results, 5800 Sir Francis Drake Blvd, San Geronimo. Prepared for Marin County Environmental Health Services, November 16, 2023.
- California Geological Survey (CGS), 2008. Guidelines for Evaluating and Mitigating Seismic Hazards in California. Special Publication 117A.
- California Regional Water Quality Control Board – San Francisco Region (RWQCB), 2000. Case Closure Letter and Site Summary Form for San Geronimo Golf Course, 5800 Sir Francis Drake Blvd., San Geronimo, Marin County. UST Case No. 21-0121. Letter from Lawrence Kolb, RWQCB to Robert Pickett, Pro/Manager San Geronimo Golf Course, August 2, 2000.
- Jennings C.W. and Bryant, A. 2010. Fault Activity Map of California. California Geologic Data Map Series. Map No. 6. California Geological Survey.
- MarinMap 2023, Geographic Information System for Marin County California. Accessible at <https://www.marinmap.org/Html5Viewer/Index.html?viewer=smmdataviewer>. Accessed September 2023.
- RGH Consultants, (RGH), 2023. Geotechnical Study Report (Draft) San Geronimo Golf Course Clubhouse Parcel APN 172-371-04, 5800 Sir Francis Drake Boulevard, San Geronimo, California. Prepared for the County of Marin Facilities Planning and Development Department. August 4, 2023
- Rice, Salem J., Smith T., and Strand R., 1976. (Rice et.al 1976) Geology for Planning: Central and Southeast Marin County, CDMG Open File Report 76-2 California Geological Survey (CGS) 1976. [formerly the California Department of Conservation, Division of Mines and Geology (CDMG)].
- Sicular Environmental Consulting and Natural Lands Management (SEC), 2021. San Geronimo Golf Course Clubhouse Parcel: Environmental Constraints Analysis. Prepared for Marin County Fire Department, October 2021.
- USGS, 2016. Earthquake Outlook for the San Francisco Bay Region 2014-2041. Fact Sheet 2016-3020, Revised August 2016 (version 1.1). Accessible at: <https://pubs.er.usgs.gov/publication/fs20163020> Accessed January 19, 2023.

8. Greenhouse Gas Emissions

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) **Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

b) **Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

The Bay Area Air Quality Management District (BAAQMD) recently revised its significance thresholds for greenhouse gas (GHG) emissions and climate change impacts (BAAQMD, 2022). Rather than a “bright line” limit on mass emissions of GHGs, the BAAQMD now requires land use projects to demonstrate a “fair share” contribution to meeting the State’s 2045 carbon neutrality goal, established by Governor Brown in Executive Order B-55-18, and more recently codified by Governor Newsom’s signing of AB 1279 in September 2022. The BAAQMD’s new threshold states that a project’s fair share of implementing the carbon neutrality goal can be met by demonstrating either A or B in the following:

A. Projects must include, at a minimum, the following project design elements:

1. Buildings

- a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA *Guidelines* [Energy analysis].

2. Transportation

- a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a

locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA:

- i. Residential projects: 15 percent below the existing VMT per capita
 - ii. Office projects: 15 percent below the existing VMT per employee
 - iii. Retail projects: no net increase in existing VMT
- b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA *Guidelines* Section 15183.5(b).

The BAAQMD’s justification report for this policy (BAAQMD, 2022) states that, “If a project is designed and built to incorporate these design elements, then it will contribute its portion of what is necessary to achieve California’s long-term climate goals—its “fair share”—and an agency reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change. If the project does not incorporate these design elements, then it should be found to have a significant climate impact because it will hinder California’s efforts to address climate change.”

Since completion of the 2020 IS/MND, Marin County has updated its Climate Action Plan for the unincorporated area of the County. Climate Action Plan 2030 contains numerical targets for greenhouse gas (GHG) reductions consistent with the Statewide goal, established by Senate Bill 32 of 2016, to reduce emissions 40 percent below 1990 levels by 2030. Strategies for achieving the targeted GHG reductions include the same measures for building energy efficiency and GHG reduction and transportation as required by the new BAAQMD thresholds. For building energy efficiency and GHG reduction, these include accelerating installation of solar and other renewable energy systems, including rooftop solar, and accelerating electrification of building systems and appliances. For reducing GHG emissions from transportation, Climate Action Plan 2030 includes several strategies, including increasing use of zero emission vehicles, (ZEVs) and VMT reduction measures such as promoting bicycling, walking, and public transportation; establishing safe routes for walking to school; encouraging working remotely from home (teleworking); and promoting land use and development policies that prioritize infill housing.

The building efficiency, electric vehicle charging, and GHG reduction strategies are met through compliance with Marin County’s Green Building Code,²⁴ which incorporates and

²⁴ The latest Marin County Green Building Code (Marin County code Title 19 - Building Code, Subchapter 2 – All-electric and Green Building Requirements) went into effect January 1, 2023.

exceeds the requirements of CALGreen. The Green Building Code requirements for non-residential new construction include the following:

- All Electric, which includes all-electric heating, cooling, and cooking appliances and no gas or propane plumbing or infrastructure;²⁵
- On-site solar photovoltaic generation and battery storage;
- Compliance with State energy efficiency and water conservation standards;
- Use of low-carbon construction materials, including low carbon concrete and recycled content building materials;
- Facilities to enable low-carbon transportation, including bicycle parking facilities and electric vehicle (EV) charging facilities;
- Requirement to recycle or salvage at least 65% of all non-hazardous construction and demolition waste;
- Provide adequate space for storage and collection of recycled materials.

As discussed in Section IV.6, Energy, while the Project would be required to comply with Building Code requirements. Compliance with the Green Building Code will ensure that the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation.

The applicable VMT reduction strategies included in Climate Action Plan 2030 are more general, county-wide programs. To the extent that these are implemented throughout the unincorporated area, including San Geronimo Valley, they would facilitate and encourage VMT reduction, consistent with the 15% VMT reduction target included in the BAAQMD threshold. Furthermore, as discussed in Section IV.15, Transportation, the Project is expected only to relocate the starting and ending point of existing vehicle trips associated with the Woodacre Fire Station; the Project would generate few if any additional trips.

Compliance with Green Building Code requirements for all-electric construction, EV charging facilities, energy efficiency and water conservation, use of low-carbon building materials, and recycling of construction waste, together with the VMT reduction strategies specified in Climate Action Plan 2030 and being employed throughout the County, will ensure that the Project contributes its fair share toward meeting the State's carbon neutrality goals, and will therefore result in a less-than-significant impact.

References

Bay Area Air Quality Management District (BAAQMD), 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. April 2022. <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>

²⁵ Building Code Section 19.04.010 provides an exception for emergency electrical generation back-up power equipment for Essential Services Buildings.

Marin County, 2020. Climate Action Plan 2030. Adopted by the Board of Supervisors
December 2020. Available at:
<https://www.marincounty.org/depts/cd/divisions/sustainability/climate-and-adaptation>.

9. Hazards and Hazardous Materials

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Introduction

San Geronimo Valley is in unincorporated Marin County and contains primarily residential properties with some small commercial establishments. Communities in the valley include Woodacre, San Geronimo Village, and Forest Knolls. The nearest school, San Geronimo Childcare Center, is located 400 feet southwest and across Sir Francis Drake Boulevard from the Clubhouse Parcel, where development of the new fire station is proposed. The closest airport (San Rafael Airport) is located 7.75 miles east. There are no commercial gasoline fueling stations in the San Geronimo Valley and no large industrial operations except for the San Geronimo Water Treatment Plant, which is owned and operated by the Marin Municipal Water District.

The primary sources of information regarding hazardous materials storage and use at the Project site included the GeoTracker database, which is maintained by the State Water Resources Control Board (SWRCB)²⁶; a Phase 1 Environmental Site Assessment (ESA) prepared by Amicus for the Trust for Public Lands (TPL) in 2017 (Amicus, 2017); and information provided in the Opportunities and Constraints Analysis completed in 2021 (SEC, 2021).

The Project site has been a golf course since it was developed in 1965 and 1966. The use of hazardous materials has consisted of onsite storage and dispensing of gasoline and diesel for maintenance equipment and storage of golf course maintenance products including fertilizers and agricultural products (e.g., herbicides, pesticides, and soil amendments).

Gasoline was stored near the maintenance building on parcel 173-372-14 in an underground storage tank (UST). The UST was removed in 1989. Excavation and soil testing at the UST site revealed that it had leaked and impacted nearby soil and shallow groundwater with gasoline and benzene. The petroleum-contaminated soils were over-excavated and disposed offsite and test wells were installed to monitor the shallow plume of impacted groundwater. Groundwater sampling continued through the 1990's and, throughout that period, petroleum concentrations continued to decrease. The leaking UST case was closed in 2000 by the Regional Water Quality Control Board (RWQCB) because it determined that the site had been adequately investigated, the source of the gasoline in the soils was removed, there had been no free phase gasoline detected, and concentrations in groundwater had substantially decreased.²⁷ The UST was replaced with a dual compartment above ground petroleum storage fault for diesel and gasoline. Other than the maintenance building UST, there have been no other USTs on the Project site.

Hazardous and non-hazardous materials including fertilizers and agricultural products were stored in small commercial-use containers in the maintenance barn and shed. There are no known reports of spills or releases of these materials (Amicus, 2021). Fertilizers and other agricultural products were typically ordered in quantities reflecting short-term application needs and not stored in bulk quantities on the property.

According to the GeoTracker database, there are four properties within a 2-mile radius of the Project site that have had reported incidences of hazardous materials or petroleum releases to the environment. These sites are listed in **Table IV.9-1**, below. Information

²⁶ GeoTracker is the State Water Resources Control Board's (SWRCB) data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank (LUST) Sites, Department of Defense Sites, and Cleanup Program Sites. GeoTracker also contains records for various unregulated projects as well as permitted facilities, including: Irrigated Lands, Oil and Gas production, operating Permitted USTs, and Land Disposal Sites.

²⁷ California Regional Water Quality Control Board – San Francisco Region (RWQCB). Case Closure Letter and Site Summary Form for San Geronimo Golf Course, 5800 Sir Francis Drake Blvd., San Geronimo, Marin County. UST Case No. 21-0121. Letter from Lawrence Kolb, RWQCB to Robert Pickett, Pro/Manager San Geronimo Golf Course, August 2, 2000.

on these sites indicates that the reported contamination resulted from leaking USTs impacting soil and shallow groundwater near the leaking tank. All reported hazardous materials sites listed on Table IV.9-1 have been remediated and are considered closed cases by the RWQCB. Additionally, the Phase I ESA completed for the property in 2017 did not identify nearby sites that are currently storing bulk chemical or petroleum products or engaging in operations that store, use, or transport large quantities of hazardous materials or hazardous wastes.

Table IV.9-1. Sites with Past Soil or Groundwater contamination within 2 miles of Subject parcel

Site Name	Case Status ^A	Distance to Subject Parcel (Approximate Feet)	Address	Town/Community	Case/Site Type	Age of Case (years)
Pacific Bell	Completed – Case Closed	1,500' Southeast	360 Geronimo Valley Drive	San Geronimo	LUST ^B	34
San Geronimo Water Treatment Plant	Completed – Case Closed	2,200' East-Southeast	330 Geronimo Valley Drive	San Geronimo	LUST	18
Woodacre Fire Station	Completed – Case Closed	7,200' Southeast	33 Castle Rock Road	Woodacre	LUST	14
Forest Knolls Garage	Completed – Case Closed	6,200' East	6700 Sir Francis Drake Boulevard	Forest Knolls	LUST	29

Source: California State Water Resources Control Board, 2023.

A – If a case is determined to be *Completed – Case Closed*, it means that the source of the contamination was removed, the soil or groundwater contamination was delineated, the impacted soil and/or groundwater was properly disposed of or remediated onsite, and contaminant levels have been reduced to below regulatory agency action levels. Each case must be reviewed by a regulatory agency (e.g., SWRCB) and, in order for that case to be closed, that agency must make the determination that no further action is necessary.

B – Leaking Underground Storage Tank

Regulatory Framework

The management, storage, use, transportation, and disposal of hazardous materials and wastes are regulated by numerous federal, state, and local regulations. This section discusses those regulations that apply to the Project and that were considered in the impacts analysis presented below.

The California Department of Toxic Substances Control (DTSC) defines a hazardous material as: “a substance or combination of substances that, because of its quantity, concentration or physical, chemical, or infectious characteristics, may either: 1) cause, or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or 2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed.” Hazardous materials are generally classified based on the presence of one or more of the following four properties: toxicity, ignitability, corrosivity, and reactivity.

In accordance with Government Code Section 65962.5, the California DTSC maintains a hazardous waste and substances site database, also known as the “Cortese List.”²⁸ The data resources that provide information regarding the facilities or sites that meet “Cortese List” requirements are the:

- DTSC list of Hazardous Waste and Substances sites.
- SWRCB’s list of Leaking UST sites from the GeoTracker database.
- SWRCB’s list of solid waste disposal sites with waste constituents above hazardous waste levels outside the waste management unit.
- SWRCB’s list of “active” Cease and Desist Orders.
- DTSC’s list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.

Federal statute 49 CFR regulates shipment of hazardous materials by ground, air, and vessel. The Department of Transportation (DOT), which includes the Federal Motor Carrier Safety Administration (FMCSA) is responsible for enforcing 49 CFR. In California, other agencies responsible for regulation and enforcement of hazardous materials use, storage, and shipment include the DTSC, California Environmental Protection Agency (CalEPA), California Division of Occupational Safety and Health (DOSH or Cal/OSHA), California Department of Motor Vehicles (DMV), and the California Highway Patrol (CHP).

In compliance with Senate Bill 1082, California’s Secretary for Environmental Protection established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Certified Unified Program Agency (CUPA) consolidates the administration, permits, inspections, and enforcement activities associated with the regulation of hazardous materials and hazardous wastes and emergency management programs. The Marin County Department of Public Works (DPW) is designated as the CUPA that oversees the regulation of hazardous materials locally through the following programs:

- California Environmental Reporting Systems (CERS)
- Hazardous Water Generator and/or Treatment Permitting
- Underground Storage Tank (UST) program
- Aboveground Storage Tank (AST) program
- California Accidental Release Program (CalARP)

Facilities that store or use hazardous materials in the County are required to submit chemical and facility information on the CERS, which is a statewide web-based system

²⁸ The Hazardous Waste and Substances Sites List, also known as the Cortese List—named for Dominic Cortese—or California Superfund, is a planning document used by the State of California and its various local agencies and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. California Government Code section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least an annually updated Cortese List.

to support CUPAs in electronically collecting and reporting various hazardous materials-related data. Under the California Health and Safety Code, a Hazardous Materials Business Plan (HMBP) must be submitted to the local CUPA if on-site hazardous materials exceed in aggregate any of the following: 55 gallons for liquids; 500 pounds for solids; or 200 cubic feet of gases at standard temperature and pressure. The HMBP aims to prevent or minimize harm to public health and safety and the environment from the release or threatened release of a hazardous material. This is accomplished by providing emergency responders with the necessary information to effectively protect the public (CalEPA, 2023). The CalEPA oversees the implementation of the HMBP program at the state level. CUPAs, and Participating Agencies (PAs), implement the program at the local level and are responsible for enforcement and administration in their respective jurisdictions. HMBPs are required to be submitted electronically to the CERS and must include facility information, a Hazardous Materials Inventory Statement, an Emergency Response Plan, and an Emergency Response Training Plan. The HMBP must be re-certified for completeness and accuracy every year or updated and revised as necessary.

CAL FIRE-Office of the State Fire Marshal (OSFM) is responsible for ensuring the implementation of the Aboveground Petroleum Storage Act (APSA) element of the Unified Program. APSA regulates storage tank facilities that are subject to the federal Spill, Prevention, Control, and Countermeasures (SPCC) rule or tank facilities with an aggregate storage capacity of 1,320 gallons or more of petroleum in aboveground storage containers or tanks with a shell capacity²⁹ equal to or greater than 55 gallons. Petroleum tank facilities with 10,000 gallons or more of total aboveground petroleum storage capacity are inspected at least once every three years. With the exception of conditionally exempt tank facilities, all tank facilities must prepare and implement an SPCC Plan that meets current federal SPCC rule requirements (40 CFR 112 and California Health and Safety Code sec. 25270.4.5).

Worker health and safety is regulated at the federal level by the US Department of Labor, Occupational Safety and Health Administration (OSHA). OSHA regulations include training requirements for construction workers and a requirement that hazardous materials are accompanied by manufacturer's Safety Data Sheets (SDSs). Worker health and safety protections in California are regulated by the California Department of Industrial Relations (DIR). The DIR includes DOSH, which acts to protect workers from safety hazards through its Cal/OSHA program. Cal/OSHA regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. California standards for workers handling hazardous materials are contained in California Code of Regulations (CCR) Title 8 and include practices for all industries (General Industrial Safety Orders), and specific practices for construction and other industries.

²⁹ Shell Capacity means the gross storage capacity of a tank for each respective Product, based upon its dimensions.

a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The following discussion addresses parcel 172-371-04 (the Clubhouse Parcel) because this parcel would be developed with the proposed fire station, training center, administrative offices, and ancillary facilities. There would be no development on parcels 168-250-41, 172-373-01, and 172-372-14 as these parcels would be managed as open space. However, the caretaker's cottage and the associated septic system on parcel 172-372-14 may eventually be demolished as part of restoration efforts and there is a possibility that work would require asbestos abatement, as discussed below. The leaking gasoline UST on parcel 172-372-14, discussed above, was successfully remediated to the approval of the RWQCB and would not represent an adverse impact of the Project. The existing above-ground petroleum storage vault located at the maintenance shed that replaced the leaking UST in 1989 is currently not in use and may be removed during restoration efforts.

The hazardous materials issues associated with the proposed development on the Clubhouse Parcel (172-372-14) would include construction materials generated during the renovation of the clubhouse building, primarily asbestos; hazardous and non-hazardous products used during the construction of the proposed facilities; and the storage and use of bulk petroleum products and fire-retardant chemicals used during facility operations.

A site inspection conducted on the interior and exterior of the clubhouse and the caretaker's cottage identified potential asbestos containing construction materials (ACCM) in the drywall joint compounds, acoustic ceiling spray, drywall and plaster texture layers, and thermal system insulation (MDA, 2017). In addition, asbestos-cement pipe, also known as transite pipe, was identified in the potable water conveyance system on the Project site. Asbestos cement pipe is regulated similarly to other ACCMs: if it is not broken or crushed, and is not friable, it is not a hazardous waste. It may, however, be regulated as an asbestos containing material by local Air Quality Management Districts and disposal sites (DTSC, 2023).

Remodeling the existing clubhouse building and demolition of the caretaker's cottage would require that all potential ACCMs be identified, tested, and quantified prior to removal and disposal. Abatement of asbestos is strictly regulated by Cal/OSHA. OSHA Class I friable abatement regulations would apply to thermal system insulation, acoustic ceiling spray, and removal of friable asbestos-cement pipe (if any), which require abatement using full negative pressure containment, wet methods, and HEPA vacuum. Class II non-friable regulations would apply to drywall compounds, intact asbestos-cement pipe, and plaster textures, which require use of critical barriers or containment to control dust and debris and that the work be performed by qualified abatement contractors using an on-site AHERA³⁰ supervisor. All ACCM waste and debris must be

³⁰ Asbestos Hazard Emergency Response Act (AHERA) requires certification of site supervisors.

packaged to comply with Cal/OSHA requirements for proper disposal at a licensed facility.

The Project would use hazardous and non-hazardous materials during construction and operation (e.g., household cleaners, paint, concrete, cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids, and oil). These products are routinely used at construction sites and are brought to the site temporarily and as needed, stored in consumer and commercial containers, and applied in accordance with manufacturer's recommendations. During construction, mobile service trucks would regularly enter the site to fuel and lubricate construction equipment and no bulk fuels would be temporarily stored onsite. The service vehicles adhere to various protocols to prevent spills of fuels, oils, and grease, and are equipped with spill management kits to respond in the event of an inadvertent petroleum release during fueling or maintenance operations.

The proposed fire station facilities would include the storage and use of fire-retardant chemicals, gasoline, and diesel fuel. Fire retardant foam and other products contain chemicals that could present a human health risk. Fire retardant would be transported and stored in appropriate, DOT-approved storage containers in accordance with the facilities Hazardous Materials Business Plan. Training exercises involving fire retardant chemicals would be conducted under controlled conditions in accordance with MCFD training protocols. Bulk fuel containment would comply with the Marin DPW CUPA regulations for the storage and dispensing petroleum and the facility would be required to complete an SPCC Plan. Gasoline and diesel would be stored in DOT-approved double-walled containment vaults equipped with spill detection and automatic shut-off devices to avoid spills. The fire station would be equipped with spill prevention and clean-up kits to respond if a spill occurred during fueling operations.

The County would manage hazardous materials and waste during the Clubhouse renovation, construction of the fire station facility, and during routine facility operations. Considering that hazardous materials and waste handling is strictly regulated on the federal, state and local level, compliance with the existing hazardous materials regulations and hazard mitigation programs would ensure that the use, transportation, and storage of hazardous materials during construction and operation of the fire station would not create a significant hazard to the public or the environment. The impact, therefore, would be less than significant.

b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Similar to Topic a, above, the following discussion addresses the Clubhouse Parcel Under the Project, parcels 168-250-41, 172-372-01 and 172-372-14 would be managed as open space and there is no potential for impacts related to upset or accidents involving hazardous materials. However, as discussed above, parcel 172-372-14 contains an existing petroleum storage vault and the caretaker's house on that parcel may be demolished during restoration efforts. The existing petroleum vault is not in

operation and thus, there is a low potential for it to release liquid fuel or vapors. The demolition of the caretaker's house may require asbestos abatement prior to demolition but all abatement activities would comply with strict Cal/OSHA regulations and thus the risks for releases of asbestos during demolition operations are very low.

The Project would require the use of hazardous and non-hazardous materials during construction and operation (e.g., household cleaners, paint, concrete, cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids, and oil). Consistent with the analysis presented in Topic a, above, there is a very low potential that these materials would be inadvertently released to the environment. These materials would be transported and used per manufacturer recommendations and stored in consumer and commercial containers.

During construction activities, compliance with the Construction General Permit (CGP) would require preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) (see Section 10, Hydrology and Water Quality). The SWPPP would specify construction best management practices (BMP's) for preventing the release of hazardous materials offsite. BMPs for these materials include routine leak inspections of equipment, maintaining labelling and inspecting integrity of containers, and ensuring that construction materials are disposed of in accordance with manufacturer's recommended disposal practices and applicable hazardous waste regulations.

Project construction of utilities and foundations would involve subsurface excavation. If shallow groundwater were encountered during excavation activities, it would be evacuated from the trench to create a dry work area. Contaminated soil and/or groundwater, if released to the environment, could present an exposure risk to site workers. However, there is no evidence of past or current use or storage of hazardous materials and/or petroleum fuels, and no reports documenting historic hazardous material releases, leaking USTs, or required soil and groundwater remediation on the Clubhouse Parcel. Therefore, the potential to encounter shallow contaminated groundwater during construction is very low.

The reported contamination cases within a 2-miles radius of the Project site (see Table 1) resulted from leaking USTs impacting soil and shallow groundwater near the UST site and did not cause groundwater plumes that transported the contamination offsite. These cases are considered adequately remediated by the RWQCB and are considered closed cases; furthermore, the nature of the contamination and location preclude these sites from impacting proposed development activities on the Project site.

During facility operation, fuels (diesel and/or gasoline) would be stored onsite for vehicle and fire equipment refueling. Fuels would be stored in above ground storage tanks (ASTs) located on concrete slabs. The ASTs would be equipped with gasoline vapor controls to significantly reduce emissions of volatile organic compounds and hazardous air pollutants. Only vehicles equipped with State-certified On-Road Vapor Recovery (ORVR) systems would be fueled from the AST. CUPAs (described under the Regulatory Framework, above) are vested with the responsibility and authority to implement the APSA. Under the APSA, each owner or operator of a regulated AST must

prepare an SPCC Plan in accordance with federal and state requirements. Further, any significant release or threatened release of a hazardous material requires immediate reporting by the responsible person to the Cal OES State Warning Center and the CUPA.

The construction and operation of the proposed fire station headquarters facility would involve the use, storage, and transportation of hazardous materials and possibly hazardous waste. However, considering the current regulatory structure addressing hazardous materials at the federal, state and local levels, the potential for hazardous materials to be released to the environment through upset and/or accident conditions, to a degree that it creates a substantial public or environmental hazard, would be very low. This impact is therefore less than significant.

c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The nearest school, San Geronimo Childcare Center, is located 400 feet southwest and across Sir Francis Drake Boulevard from the Project site. As described under Topics a and b, above, the Project has a low potential to cause hazardous emissions or result in the release of hazardous materials into the environment through the routine transport, use, or disposal of hazardous materials or waste. This impact is therefore less than significant.

d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As discussed above in the Regulatory Framework section, the SWRCB's GeoTracker is one of the several data resources that comprise the "Cortese List." CalEPA is mandated to develop and maintain the Cortese List pursuant to Government Code Section 65962.5. The leaking UST that was formerly at the maintenance building on parcel 17-372-14 is listed on the SWRCB's GeoTracker database. However, the UST was removed, the petroleum-contaminated soil and groundwater was excavated and removed, and the site was remediated to the satisfaction of the RWQCB; thus, the case was closed. The near-vicinity (2-mile radius) contaminated sites listed on Table 2.9-1 are also listed on the Cortese List and are either downgradient or cross-gradient and at an adequate distance to preclude impacting the proposed development of the fire station facilities on the Project site. These cases were also remediated and closed by the RWQCB. The contaminated sites that were included on the Cortese List pursuant to Government Code Section 65962.5, including the Project site, no longer represent a threat to the public and environment and therefore, this impact is less than significant.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?**

The Project site is not located within an Airport Land Use Compatibility Plan and is not within two miles of a public airport. The closest airport is the private San Rafael Airport is located 7.75 miles east. Therefore, there is no impact.

- f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

As discussed in the Project Description, the proposed MCFD fire station and headquarters would meet current and future community emergency service demands while the existing Woodacre MCFD facility is undersized and beyond its normal useful life for an essential service facility. Development of the new fire station, training facilities, and administration offices would not impair the implementation of adopted emergency response plans or emergency evacuation plans; but rather, it would likely improve emergency response for the San Geronimo Valley communities. Additionally, the proposed location at Sir Francis Drake Boulevard and Nicasio Valley Road would improve wildland fire response to wildfire urban interface areas in and around San Geronimo Valley as compared to existing location.

The site plan for the proposed MCFD fire station and headquarters (Section II, Project Description, Figure 6) has been designed to accommodate the depth and size of fire engines and apparatuses, so they can traverse through the station area with sufficient turnaround radii.

Review of the evacuation plans for San Geronimo and Woodacre revealed that the recommended evacuation route would be Sir Francis Drake Boulevard east toward Fairfax/San Rafael via San Geronimo Valley Road and Nicasio Valley Road (MCFD, 2023). Evacuation west on Sir Francis Drake and north on Nicasio Valley Road would only be used if directed by fire officials. It should be noted that the evacuation plan for San Geronimo currently identifies the parking lot on the Clubhouse Parcel as a temporary refuge area.³¹ Considering its proposed location and the current evacuation routes for San Geronimo/Woodacre community, relocation of the MCFD headquarter facilities would likely allow the MCFD to coordinate and implement emergency response and evacuation effectively from a central location with improved roadway access. Therefore, because the Project would not disrupt or interfere with an adopted emergency response plan or emergency evacuation plan and would likely improve emergency response time and facilitate evacuation management, this impact is less than significant.

³¹ Temporary Refuge Areas are intended to be a last resort if evacuation is not possible.

References

Amicus – Strategic Environmental Consulting (Amicus), 2017. Phase 1 Environmental Site Assessment. San Geronimo Golf Course Project Property, 5800 Sir Francis Drake Boulevard, San Geronimo, California. Prepared for the Trust for Public Lands. October 18, 2017.

CalEPA, 2023 Hazardous Materials Business Plan, Available at <https://calepa.ca.gov/hazardous-materials-business-plan-program/>

California Department of Toxic Substance Control (DTSC, 2023). Frequently Asked Questions: Transite Pipe Removal. <https://dtsc.ca.gov/faq/asbestos-im-removing-transite-pipe-does-it-have-to-be-managed-as-a-hazardous-waste-who-can-accept-it/> Accessed October 19, 2023.

California State Water Resources Control Board, 2023. GeoTracker. <https://geotracker.waterboards.ca.gov/>

Fire Safe Marin, 2023. Evacuation Maps, San Geronimo, Zone 2 and 4. Available at: <https://firesafemarin.org/prepare-yourself/evacuation-guide/evacuation-maps/>

Monte Deignan & Associates (MDA), 2017. Preliminary Site Walk and Observations at San Geronimo Golf Course in San Geronimo, California. Prepared for Nova Partners. October 25, 2017

Sicular Environmental Consulting and Natural Lands Management (SEC), 2021. San Geronimo Golf Course Clubhouse Parcel: Environmental Constraints Analysis. Prepared for Marin County Fire Department, October 2021.

10. Hydrology and Water Quality

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Hydrologic and Water Quality Setting

The Project Site is located in the 9.3 square mile drainage basin of San Geronimo Creek, which is tributary to Lagunitas Creek, which flows northwest to Tomales Bay. The 157-acre Project site is comprised of four separate land parcels (APNs 168-250-41, 172-372-14, 172-372-01, and 172-371-04 or the "Clubhouse Parcel"). Larsen Creek, a major tributary to San Geronimo Creek, traverses parcel 168-250-41 (Figure 1). East Fork Larsen Creek and its tributaries flow from the northern portions of Roy's Redwoods

Preserve under Nicasio Valley Road onto parcel 168-250-41 and into a pond (a water feature associated with the prior golf course) and then through a culvert to rejoin the natural channel which joins West Fork Larsen Creek at the confluence to Larsen Creek just north of Lagunitas School Road. West Fork Larsen Creek bisects the western portion of parcel 168-250-41, flowing from its headwaters to the north of the parcel. San Geronimo Creek traverses the southern portions of parcels 172-372-14 and 172-372-01. A series of freshwater ponds with associated wetlands are located on the eastern and western portions of parcel parcels 172-372-14. The ponds on the western side of the parcel are immediately adjacent to a stormwater conveyance ditch that borders the eastern side of Nicasio Valley Road. The ponds are not directly hydrologically connected to roadside drainage channels or ephemeral channels tributary to San Geronimo Creek (i.e., the ponds do not receive flow from the drainage ditch or watercourse) (Sutro, 2021). The Clubhouse Parcel contains two unnamed ephemeral³² watercourses (Figures 1 and 2 in Section II.F, Project Description) that drain the western and eastern portions of the parcel as well as the slopes to the north. These drainages convey runoff in a southerly direction before joining stormwater roadside drainage ditches and crossing beneath Sir Francis Darke Boulevard and flowing to San Geronimo Creek. The western and eastern surface water features that drain the Clubhouse Parcel are described in detail as follows.

The watercourse located on the western portion of the Clubhouse Parcel flows in a southerly direction roughly parallel to Nicasio Valley Road for approximately 300 feet via a poorly defined (i.e., lacks physical features such as defined banks) ephemeral swale to the corner of Nicasio Valley Road and Sir Francis Drake Boulevard (Figure 7). At Sir Francis Drake Boulevard, the watercourse joins a road drainage system that flows for approximately 400 feet in a westerly direction along the southern edge of the Clubhouse Parcel. This road drainage reach, which is not identified as a stream (ephemeral, intermittent, or perennial) in the United States Geologic Survey (USGS) National Hydrography Dataset (NHD), consists of a defined open channel, up to approximately 10 feet wide, and supports riparian vegetation. The watercourse crosses beneath Sir Francis Drake Boulevard via a culvert, then continues in a roadside stormwater collection and conveyance ditch along the eastern side of Nicasio Valley Road, then crosses beneath San Geronimo Valley Drive and flows through a residential property within a concrete lined channel toward its confluence with San Geronimo Creek.

The watercourse on the eastern side of the Clubhouse Parcel is a larger and more complex network of ephemeral channels draining steeper upgradient slopes to the north. The watercourse originates in the hillside valleys north of the Clubhouse Parcel and the channel network flows in a southerly direction onto the parcel, where flows join the on-

³² Stream locations and classifications are based on the USGS National Hydrography Dataset (NHD). The USGS defines an ephemeral stream as “a stream or part of a stream that flows only in direct response to precipitation; it receives little or no water from springs, melting snow, or other sources; its channel is at all times above the water table.” The USGS defines an intermittent stream as “a stream that flows only when it receives water from rainfall runoff or springs, or from some surface source such as melting snow” and a perennial stream as “a stream that normally has water in its channel at all times.”

site stormwater drains and ditches bordering the northern boundary of the parking lot and ephemeral channels to the east of the community garden. Flows are then conveyed by a culvert beneath the existing access road and the former fairway for approximately 250 feet. The drainage daylights approximately 150 feet north of Sir Francis Drake Boulevard into a defined straight channel approximately 35 feet wide, covered in annual grasses and other upland vegetation (i.e., no defined riparian vegetation), and then crosses beneath Sir Francis Drake Boulevard via a 48-inch concrete, at-grade culvert (Figure 7). South of Sir Francis Drake Boulevard, the channel extends for approximately 600 feet in a southerly direction across the former golf course toward its confluence with San Geronimo Creek via a poorly defined seasonal swale. Additionally, the former clubhouse and paved areas of the Clubhouse Parcel (parking lot and access roads) collect stormwater via storm drains and storm runoff is conveyed to San Geronimo Creek via the eastern ephemeral channel.

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) designates beneficial uses³³ for specific surface waters and establishes water quality objectives to ensure those designated beneficial uses do not become impaired (RWQCB, 2019). The beneficial uses designated for San Geronimo Creek include cold freshwater habitat (COLD), spawning, reproduction, and/or early development (SPWN), warm freshwater habitat (WARM), preservation of rare and endangered species (RARE), wildlife habitat (WILD), and water-contact and non-contact recreation (REC1 and REC2).

San Geronimo Creek along almost all of its length, and including within the Project site, is fairly straight and is deeply incised (6-feet or more), as are many of its tributaries and Lagunitas Creek along much of its length (RWQCB, 2014). These waterways have become incised as a result of historic land-use related changes, such as intensive grazing (which can result in soil compaction and loss of vegetation), historic logging of old-growth redwoods, and development resulting in increased area of impervious surfaces, all of which resulted in significant storm runoff increases. In 1990, based on evidence of widespread erosion and concern regarding adverse impacts to fish habitat, the Water Board listed Lagunitas Creek as impaired by sedimentation, pathogens, and nutrients under Section 303(d) of the Clean Water Act. The land area identified as contributing to the water quality impairment applies to the entire land area and all channels draining into and including Lagunitas Creek below Kent Lake and Nicasio Reservoir, which includes San Geronimo Creek and its tributaries (RWQCB, 2014).

The law requires jurisdictions to develop action plans, known as a Total Maximum Daily Load allocation (TMDL), to improve water quality for 303(d) listed waters. The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved. A sediment TMDL has been established for Lagunitas Creek (RWQCB, 2014) due to the finding that anthropogenic watershed disturbances have accelerated the natural processes of erosion and sedimentation in Lagunitas Creek

³³ Beneficial uses are those resources, services, and/or qualities of aquatic systems that are to be maintained and are the ultimate goals for protecting and achieving high water quality.

and tributary water bodies. San Geronimo Creek, which receives flows from the Clubhouse Parcel drainages and from Larsen Creek, is a primary sediment source to Lagunitas Creek and is subject to the TMDL.

Marin Countywide Plan (CWP) Policy BIO-4.1 defines Stream Conservation Areas (SCAs) and establishes development buffer zones for ephemeral, intermittent, and perennial streams (but excludes roadside drainage ditches³⁴ specifically for the protection of water quality and salmonid habitat. The proposed development of new fire station facilities avoids SCAs: no development would occur within an SCA.

a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Development of the Clubhouse Parcel would include earthwork activities (i.e., grading, excavation, and other soil-disturbing activities) and placement of engineered fill soils during construction phases. Stormwater runoff from construction activities is a common source of pollutants (mainly sediment) to receiving waters. Earthwork activities can loosen soils making them more susceptible to erosion from stormwater runoff and causing them to migrate to storm drains and drainage channels and to downgradient water bodies, such as San Geronimo Creek. Following completion of construction, the addition of impervious surfaces can decrease rainfall infiltration into soils and increase runoff flow rates and volumes. Increased runoff can erode slopes and surface water channels as well as increase the transport of sediment and other pollutants downgradient. Increased sediment in San Geronimo Creek could degrade water quality, exceed water quality standards, and degrade aquatic habitat for salmonids.

Because the Project exceeds one acre of disturbance by construction activities, it would be required to comply with National Pollutant Discharge Elimination System (NPDES) regulations and obtain coverage under the State Construction General Permit³⁵ (CGP). Under the requirements of the CGP, the permit applicant or their contractor(s) would implement stormwater controls referred to as construction Best Management Practices (BMPs), as set forth in a detailed Stormwater Pollution Prevention Plan (SWPPP). SWPPPs are a required component of the CGP and must be prepared by a California-certified Qualified SWPPP Developer (QSD) and implemented by a California-certified Qualified SWPPP Practitioner (QSP). In addition, the SWPPP would be required to

³⁴ The CWP Glossary defines a “stream” as: “[a] natural or once natural flowing open drainage channel with an established bed and bank. These consist of perennial, intermittent, and ephemeral streams, including open waterways that have been restored, modified, or channelized, but do not include ditches, culverts, or other above- or belowground conduits constructed specifically for storm drainage function. Perennial and intermittent streams, shown as solid or dashed blue lines (or purple lines) on the most recent appropriate USGS data, and ephemeral streams..., are subject to Stream Conservation Area protection policies.”

³⁵ The State of California recently adopted a new NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance on September 8, 2022 (ORDER WQ 2022-0057-DWQ), which became effective on September 1, 2023, and which supersedes Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ and 2012-0006-DWQ (i.e., the prior CGP).

include a visual monitoring program and a sediment monitoring plan as the site discharges directly to a water body included on the 303(d) list for sediment as defined in the TMDL. SWPPPs must describe the specific erosion control and stormwater quality BMPs needed to minimize pollutants in stormwater runoff and detail their placement and proper installation. The BMPs are designed to prevent pollutants from contacting stormwater and to keep all products of erosion (i.e., sediment) and stormwater pollutants from migrating offsite into receiving waters. Typical BMPs implemented at construction sites include placement of sediment barriers around storm drains, the use of fiber rolls or gravel barriers to detain small amounts of sediment from disturbed areas, and temporary or permanent stockpile covers to prevent rainfall from contacting the stockpiled material. In addition to erosion control BMPs, SWPPPs also include BMPs for preventing the discharge of other pollutants such as paint, solvents, concrete, and petroleum products to downstream waters. BMPs for these pollutants also include routine leak inspections of equipment, maintaining labelling and inspecting integrity of containers, and ensuring that construction materials are disposed of in accordance with manufacturer's recommended disposal practices and applicable hazardous waste regulations.

Under the provisions of the CGP, the QSD is responsible for assessing the risk level of a site based on both sediment transport and receiving water risk and developing and implementing the SWPPP. Projects can be characterized as Risk Level 1, 2, or 3, and these risk levels determine the minimum BMPs and monitoring that must be implemented during construction. Under the direction of the QSD, the QSP is required to conduct routine inspections of all BMPs, conduct surface water sampling, when necessary, and report site conditions to the State Water Resources Control Board (SWRCB) using the Stormwater Multi-Application Reporting and Tracking System (SMARTS). Compliance with the CGP is required by law and has proven effective in protecting water quality at construction sites.

Following the completion of construction (post-construction), the Project would be subject to compliance with the Phase II Stormwater NPDES Permit for small municipal separate storm sewer systems (MS4s) covering Marin's cities, towns and unincorporated areas. Provision E.12 of the MS4 Permit, the "Post-Construction Stormwater Management Program," is administered locally under the MCSTOPPP. Under MCSTOPPP post-construction requirements, the Project would be required to implement an approved Stormwater Control Plan consistent with the Bay Area Stormwater Management Agencies Association (BASMAA) post-construction manual (BASMAA, 2019), which specifies design guidance for stormwater treatment and control for projects in Marin. At a minimum, the proposed development of the new fire station would be required to adhere to MCSTOPPP provisions, which would require source controls of stormwater volumes and implementation of BMPs for stormwater quality management.

Additionally, because the Project would result in the addition of over 5,000 square feet of impervious surface, the final Project design would be subject to the MCSTOPPP requirements for a "Regulated Project" and would therefore be subject to more stringent post-development stormwater requirements than those described above, including implementation of Low Impact Design (LID) requirements. MCSTOPPP post-construction LID requirements specify that where feasible, pervious surfaces be used

instead of paving so that runoff can infiltrate to the underlying soil. Remaining runoff from impervious areas must be captured and used or treated through bioretention methods. Regulated Projects must also incorporate pollutant source control BMPs into the site design consistent with the BASMAA post-construction manual Appendix A checklist (BASMAA, 2019).

Consistent with MCSTOPPP requirements under the Phase II Stormwater NPDES Permit for MS4s, the Project includes design features that reduce runoff and peak storm discharges by implementing Low Impact Design (LID) stormwater measures (see Section *Stormwater Controls*). The Project includes improvements to the existing drainage system within the Clubhouse Parcel that ensures post-project drainage patterns are substantially similar to pre-project drainage patterns. Further, the proposed drainage improvements include two stormwater bioretention basins to which onsite drainage from developed areas would be routed prior to flowing to San Geronimo Creek. The bioretention basins would be appropriately sized and designed consistent with the 2019 BASMAA Post-Construction Manual design requirements (BASMAA, 2019) to provide stormwater treatment via biofiltration and to ensure that the peak stormwater flow to downgradient receiving waters from the 100-year 24-hour design storm is not increased as compared to pre-Project levels (BKF Engineers, 2023).

Required compliance with the prescriptions set forth by the CGP, SWPPP, and the post-construction requirements of MCSTOPPP, including application of BASMAA design guidelines, as well as implementation of associated BMPs, LID design features, and pollutant source controls, would prevent the discharge of pollutants to surface waters or groundwater and minimize or eliminate the potential for degradation of surface water or groundwater quality resulting from implementation of the Project. Water quality impacts related to violation of water quality standards or degradation of water quality would therefore be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Pumping of groundwater can cause groundwater levels to decline in the area around the point of extraction, which could interfere with the operation of nearby wells, if present. The proposed Project would not include installation of groundwater wells or long-term groundwater extraction. Water service would be provided by MMWD.

Project construction of utilities and foundations would involve subsurface excavation. If shallow groundwater were encountered during excavation activities, it would have to be pumped out of the construction trench to create a dry work area. If excavations intersect unanticipated shallow groundwater and dewatering activities are required, dewatering would be temporary, localized to sites of excavation, and would typically involve the extraction of low volumes of shallow groundwater from excavation trenches. Because of its short-term nature, construction dewatering would not affect local groundwater levels or volumes.

Development of the Clubhouse Parcel, including new buildings and new paved surfaces, would not add a sufficient area of impervious surfaces such that regional groundwater recharge from rainfall infiltration into soils would be substantially reduced. Under existing conditions, impervious surface area in the 9.3 square mile San Geronimo Creek watershed averages approximately 5 percent and is between 2 and 5 percent in the vicinity of the parcel (Sutro, 2021). As discussed under Topic a, above, the proposed Project would be required to adhere to MCSTOPPP requirements for a Regulated Project, which included the use of pervious paving materials where feasible and/or stormwater retention and infiltration facilities. Consistent with MCSTOPPP requirements, the proposed Project includes two stormwater bioretention features which would be sized to ensure adequate biofiltration of retained stormwater and infiltration of retained stormwater into underlying soils such that the 100-year peak stormwater flow to downgradient receiving waters is not increased as compared to pre-Project levels. Adherence to such design requirements would ensure that the proposed Project would not substantially alter or reduce regional groundwater recharge. Therefore, the Project would not decrease groundwater supplies through direct withdrawals or interfere with groundwater recharge as a result of added impervious surfaces, and impacts related to groundwater supply and management would be less than significant.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:**
- i) result in substantial erosion or siltation on- or off-site?**

The proposed Project would not involve the direct alteration of a stream or river. As described in the Project Description, the proposed site plan avoids disturbance of onsite sensitive resources, including the onsite ephemeral channels and associated drainage areas within the eastern and western portions of the Clubhouse Parcel and hillside areas to the north of the parcel. The proposed Project would result in new impervious surfaces within the development envelope, which has been located to concentrate new development within previously disturbed areas. Altered drainage patterns and/or the addition of impervious surfaces can be a primary impact of development because it can increase runoff flow rates and volumes and decrease rainfall infiltration into soils. Increased runoff rates and volumes can erode slopes and surface water channels as well as transport sediment and other pollutants downgradient.

As described under topic a, above, during construction of the Project, the Applicant would be required to comply with the NPDES regulations and apply for coverage under the CGP. Under the CGP, the Applicant would be required to prepare a SWPPP. The SWPPP must include site-specific erosion and sedimentation control practices. Compliance with the requirements of the CGP, SWPPP, and the implementation of associated BMPs would prevent erosion and siltation on- and off-site during construction.

Following the completion of construction (post-construction), the Project would be subject to compliance with MCSTOPPP requirements, including source controls of

stormwater volumes and implementation of BMPs for stormwater quality management. Regulations governing development and stormwater, such as the NPDES MS4 permit and MCSTOPPP, recognize the relationship between land-use changes and runoff and typically prescribe requirements (such as stormwater retention) relating to stormwater management that minimizes concentration of site runoff and increased offsite discharges. Regulations governing development also typically protect water quality and require treating stormwater runoff via physical or biological systems (such as biofiltration) and minimizing disturbance areas.

Consistent with regulatory requirements, the proposed Project includes a stormwater management and treatment system that ensures post-development drainage patterns, stormwater runoff rates, and stormwater volumes discharged from the site would be substantially similar to pre-project conditions. The hydrology and drainage study completed to inform design of the proposed stormwater management and treatment system (BKF Engineers, 2023) included a detailed review of the hydrologic characteristics of the Clubhouse Parcel and surrounding drainage areas. Model-based analyses were conducted to quantify changes to runoff rates and volumes resulting from implementation of the Project and to determine drainage patterns.

The hydrologic study assessed potential impacts from increased runoff associated with the 100-year/24-hour design storm and the model results were incorporated into the engineering design for proposed stormwater management system components to ensure facilities were adequately sized. The regulatory standards and criteria for stormwater management and treatment required under Provision E.12 of the MS4 NPDES Permit, the "Post-Construction Stormwater Management Program," were also incorporated into the model analysis and stormwater system design.

As described in the Project Description, the design for the stormwater system includes two stormwater bioretention basins to capture, treat, and retain runoff from the developed areas of the parcel (Figure 7). The bioretention basins have been sized to ensure that the 100-year peak stormwater flow to downgradient receiving waters from the developed areas would not increase as compared to pre-Project levels. Further, the hydrology and drainage study assessed runoff rates, vegetation mediums, and basin bottom area sizing to ensure the bioretention basins would be appropriately sized to provide stormwater treatment via biofiltration for regulatory design storms specified under Provision E.12 of the MS4 NPDES Permit.

As proposed, the stormwater system will maintain the existing drainage patterns associated with the ephemeral channels (BKF Engineers, 2023). Stormwater runoff during construction and following completion of the Project would continue to flow downgradient to the two unnamed channels and then to San Geronimo Creek via culverts crossing under Sir Francis Drake Boulevard (CP1 and CP2, in Figure 7 in Section II.F, Project Description).

The proposed Project would not result in the substantial alteration of existing drainage patterns. Compliance with the requirements of the CGP, SWPPP, and MCSTOPPP, and the implementation of associated BMPs and LID design features, would prevent erosion

and siltation on- and off-site during and following construction. No other alterations to existing drainage patterns would occur on or off the Project site as a result of the proposed Project. As described under “Project Location and Setting”, stream restoration work is currently being implemented along San Geronimo Creek within the Project Site and cumulative effects are considered in Section IV.21, Mandatory Findings of Significance. Such ongoing stream restoration work, and/or any additional planned future stream restoration, is not part of the proposed Project; although any such restoration projects or actions may cause short-term increases in sedimentation during construction, over the long-term they will result in sediment reducing benefits through restoration of natural stream channel morphology and function. Impacts related to erosion and/or siltation due to altered drainage patterns would be less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

The Project site is not located within a FEMA defined flood hazard risk area associated with a 100-year flood and, as described under topic c.i, above, Project implementation would not result in substantially altered on-site drainage patterns and the stormwater management system proposed for Project ensures that peak stormwater discharge rates and volumes discharged from the Project site would remain at or below the existing conditions and not increase. Further, the stormwater management system has been designed with sizing and capacity to safely convey storm flows associated with 100-year storm. Impacts related to flooding due to altered drainage patterns or the addition of impervious surfaces following completion of construction would be less than significant.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Increased peak stormwater discharges can overwhelm stormwater conveyance systems and cause flooding on-site or downgradient. As described under topics a and c.i, above, the Project’s proposed stormwater management system has been designed consistent with regulatory requirements, including those related to conveyance capacity for peak discharges associated with the 100-year/24-hour storm. Stormwater treatment measures, such as the use of biofiltration for sediment capture, are incorporated into the design of the proposed bioretention basins to ensure pollutants are not mobilized and transported to downgradient waters. Peak stormwater discharge rates and volumes from the Project site would not increase as a result of the Project. As described in detail under topics a) and c.i), the proposed Project would not result in new sources of pollutants that could be transported via storm runoff. The proposed Project would not result in a significant impact related to exceeding stormwater conveyance infrastructure or creating additional sources of polluted runoff.

iv) Impede or redirect flood flows?

The Project site is not located within a FEMA defined flood hazard risk area associated with a 100-year flood. As described under Topic c.i, above, the stormwater management

system proposed as part of the Project is sized appropriately for the calculated peak discharges associated with the 100-year/24-hour design storm. The design of the stormwater management system considered upslope runoff contributions and maintains existing site drainage patterns by routing runoff from upslope drainage areas to the north of the Clubhouse Parcel around the development area and into existing ephemeral channels that flow to San Geronimo Creek. Stormwater runoff from the developed areas of the parcel would be conveyed, retained, and treated via the stormwater management system, which has been designed to ensure that the proposed Project does not increase the overall discharges from the Project site. Impacts related to impeding or redirecting flood flows would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The Clubhouse Parcel is not located within a FEMA defined 100-year flood hazard zone, is not in a tsunami hazard inundation zone, and is not in an area subject to current or projected future coastal flooding (Sutro, 2021). A seiche is caused by oscillation of the surface of a large enclosed or semi-enclosed body of water due to an earthquake or large wind event. The Project site is not located near a large enclosed or semi-enclosed body of water, and so is not subject to a seiche (Sutro, 2021). The Project site is not located near levees or dams and would not be exposed to flooding from the failure of one of these structures. Therefore, impacts related to the release of pollutants due to inundation of the Project by flood waters would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Basin Plan (RWQCB, 2019) is the principal water quality planning document for the region. The Basin Plan water quality objectives are designed to preserve and enhance water quality and protect the beneficial uses of all regional terrestrial surface water bodies (e.g., creeks, rivers, streams, and lakes) and groundwaters within the RWQCB's jurisdictional area. As discussed above under topics a, b, and c, the proposed Project would not cause water quality degradation, polluted runoff, or groundwater impacts. As described under topic a, the proposed Project would have a less-than-significant impact on surface water and groundwater quality on-site and off-site. The Project would comply with the requirements of the CGP under the NPDES Permit program, including implementation of BMPs and other requirements of a SWPPP, as well as MCSTOPPP stormwater management requirements, including incorporation of LID design features, all of which are designed to ensure that stormwater discharges associated with construction and use of the Project site comply with the Basin Plan water quality standards. Further, the Project would not require substantial groundwater withdrawals or reduce groundwater recharge, as discussed under topic b, and therefore would not conflict with or obstruct implementation of a sustainable groundwater management plan. Impacts relating to conflict or obstruction of implementing a water quality control plan or sustainable groundwater management plan would therefore be less than significant.

References

BKF Engineers, 2023. San Geronimo Vally – Fire Headquarters: Draft Drainage Study. Prepared for County of Marin. August 7, 2023.

Bay Area Stormwater Management Agencies Association (BASMAA), 2019. BASMAA Post-Construction Manual. Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties.

Marin County, 2007. Marin Countywide Plan. Prepared by the Marin County Community Development Agency and adopted by the Board of Supervisors, November 6, 2007.

Marin County, 2016. Landowner Resource Guide For properties near streams.

California Regional Water Quality Control Board San Francisco Bay Region (RWQCB), 2019. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).

RWQCB, 2014. Lagunitas Creek Watershed Fine Sediment Reduction and Habitat Enhancement Plan.

Sicular Environmental Consulting and Natural Lands Management, 2021. San Geronimo Golf Course Clubhouse Parcel Environmental Constraints Analysis. Prepared for Marin County Fire Department. October 2021.

Sutro Science, 2021. San Geronimo Golf Course Hydrology and Water Quality Constraints Analysis. In Sicular Environmental Consulting, 2021.

11. Land Use and Planning

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Physically divide an established community (including a low-income or minority community)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in substantial alteration of the character or functioning of the community, or present planned use of an area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Conflict with applicable Countywide Plan designation or zoning standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Physically divide an established community (including a low-income or minority community)?

The Project would involve new and remodeled construction of fire station and Fire Department Headquarters facilities within the Clubhouse Parcel, which is located in a non-residential area of San Geronimo Valley. The Project proposes no new roads, other than the new driveways providing ingress to and egress from the new fire station. The remainder of the Project site would remain as open space, open to the public. This includes the existing community garden within the Clubhouse Parcel. Therefore, the Project does not have the potential to physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The considerations of the Project’s consistency with relevant County policies discussed below represent County staff interpretation. This Initial Study does not, however, determine policy consistency. The County decision-makers make the formal policy consistency determinations. Policy inconsistencies may not necessarily indicate significant environmental effects. The State CEQA *Guidelines* Section 15358(b) states that “effects analyzed under CEQA must be related to a physical change [in the environment].” Therefore, only those policy inconsistencies that would lead to a significant effect on the physical environment are considered significant impacts pursuant to CEQA. Other policy issues not pertaining to physical changes will be addressed as part of the County’s review of the merits of the Project. Many of the

policies discussed in this section pertain to environmental topics evaluated elsewhere in this Initial Study. Where this is the case, the reader is directed to the relevant section.

As discussed in Section II.F, Project Description, County Development Code Section 22.06.050(B) exempts official activities and development of the County on land owned or leased by a governmental agency from requirements for Land Use permits and other discretionary permits. The Project, therefore, would not require a Land Use permit or other discretionary permit from the County.

The foremost plans adopted by Marin County that pertain to the Project are the 2007 Countywide Plan (CWP) and the 1997 San Geronimo Valley Community Plan (SGVCP). Both contain numerous goals, objectives, policies, and programs intended to protect the environment. Many of the land use provisions of the SGVCP were incorporated into the 2007 CWP. The SGVCP, however, is still in effect and still provides important and fine-grained guidance on future development in the area.

The SGVCP's goals include several that are relevant to the Project: Goal 1. preserve and enhance the Valley's natural resources and Rural setting; Goal 2. assure that the type and amount of growth will be consistent with maintaining the Valley's character and promoting a balance of environmental quality with sustainable community services and facilities; Goal 6. preserve and encourage diverse recreational, cultural, and educational opportunities for Valley residents; and Goal 9. promote a sustainable local economy which will benefit present and future generations without detrimentally affecting resources or biological systems and which will result in balanced communities where residents have opportunities to enjoy the components of a high quality of life, employment, affordable housing, transportation, services, and a healthy physical environment.

Environmental protection policies contained in the CWP and SGVCP that pertain to the proposed Project are considered below. Policies are also considered in several of the other topical sections in this Initial Study, including Section IV.1, Aesthetics, Section IV.4, Biological Resources, Section IV.8, Greenhouse Gases, Section IV.10, Hydrology and Water Quality, Section IV.13, Noise, and Section IV.16, Transportation. Below, policies are grouped topically to facilitate the discussion of policy consistency. Countywide Plan policies are designated "CWP" and SGVCP policies are designated "SGVCP".

Stormwater Management

CWP Policy WR-1.3 Improve Infiltration. Enhance water infiltration throughout watersheds to decrease accelerated runoff rates and enhance groundwater recharge. Whenever possible, maintain or increase a site's predevelopment infiltration to reduce downstream erosion and flooding.

CWP Policy BIO-4.19 Maintain Channel Stability. Applicants for development projects may be required to prepare a hydraulic and/or geomorphic assessment of on-site and downstream drainageways that are affected by project area runoff. This assessment

should be required where evidence that significant current or impending channel instability is present, such as documented channel bed incision, lateral erosion of banks (e.g., sloughing or landsliding), tree collapse due to streambank undermining and/or soil loss, or severe in-channel sedimentation, as determined by the County.

CWP Policy BIO-4.20 Minimize Runoff. *In order to decrease stormwater runoff, the feasibility of developing a peak stormwater management program shall be evaluated to provide mitigation opportunities such as removal of impervious surface or increased stormwater detention in the watershed.*

SGVCP Policy ER-1.5 Minimize Surface Runoff Impacts. *Watershed management for the San Geronimo Creek drainage should emphasize criteria for developing residential units, businesses, equestrian facilities, agricultural operations, and roads to minimize adverse effects of surface runoff.*

Consistent. All of these policies pertain to reduction of stormwater runoff and its adverse effects resulting from alteration of the land. As discussed in detail in Section IV.10, Hydrology and Water Quality, the Project has been designed to comply with all applicable stormwater management requirements, and would result in no net increase in stormwater runoff, nor would the Project result in substantial erosion, as discussed in Section IV.7, Geology and Soils, and Section IV.10, Hydrology and Water Quality. The Project would therefore be consistent with these policies.

Soils and Geology

CWP Policy WR-2.3 Avoid Erosion and Sedimentation. *Minimize soil erosion and discharge of sediments into surface runoff, drainage systems, and water bodies. Continue to require grading plans that address avoidance of soil erosion and on-site sediment retention. Require developments to include on-site facilities for the retention of sediments, and, if necessary, require continued monitoring and maintenance of these facilities upon project completion.*

Consistent. This policy addresses the potential for development in geologically unstable locations to result in erosion and slope failure. Section IV.7, Geology and Soils, finds that the Project would not substantially increase erosion or pose a substantial risk of slope failure. Furthermore, as described in Section 10, Hydrology and Water Quality, the Project has been designed to implement construction and post-construction stormwater management to control erosion and runoff from the Project site.

Noise

CWP Policy NO-1. Protection from Excessive Noise. *Ensure that new land uses, transportation activities, and construction do not create noise levels that impair human health or quality of life.*

Consistent. The Project would result in new noise sources during Project construction and also following construction, particularly associated with emergency vehicles operating out of the proposed new fire station. Section IV.13, Noise, however, concludes

that the noise associated with construction activities and the proposed new fire station would be less than significant, ensuring compliance with the identified policy.

Protection of Streams

CWP Policy BIO-4.1 – Restrict Land Use in Stream Conservation Areas. A SCA is established to protect the active channel, water quality and flood control functions, and associated fish and wildlife habitat values along streams. Development shall be set back to protect the stream and provide an upland buffer, which is important to protect significant resources that may be present and provides a transitional protection zone. Best management practices shall be adhered to in all designated SCAs. Best management practices are also strongly encouraged in ephemeral streams not defined as SCAs.

SGVCP Policy ER-2.1 Protect Creekside Environment. The county should continue to protect the creekside environment by implementation of the Streamside Conservation Policies EQ-2.1 through EQ 2.40 in the Environmental Quality Element of the Countywide Plan.

SGVCP Policy ER-2.3 Creekside Open Space. Smaller blocks of undeveloped Creekside parcels should be considered for open space acquisition by a service district or other agency empowered to purchase such parcels. Preservation of these areas would provide limited but functional access to many portions of the creek. This public access should be coordinated with the trails plan.

SGVCP Policy ER-2.4 Protect Aquatic Habitat. Landowners should be encouraged to employ sound land management practices which protect habitat necessary for aquatic life including the coho salmon, steelhead trout and California freshwater shrimp.

Consistent. The area proposed for development of the new fire station facilities is outside of SCAs and SCA buffers. Furthermore, as discussed in Section IV.4, Biological Resources, and Section IV.10, Hydrology and Water Quality, stormwater controls and avoidance of development in sensitive areas would ensure that the Project would not have an adverse impact on aquatic habitat or water quality in San Geronimo Creek. Therefore, the Project would be consistent with these policies.

Protection and Enhancement of Native Vegetation

CWP Policy BIO-1.5 Promote Use of Native Plant Species. Encourage use of a variety of native or compatible nonnative, non-invasive plant species indigenous to the site vicinity as part of project landscaping to improve wildlife habitat values.

CWP Policy BIO-1.6 Control Spread of Invasive Exotic Plants. Prohibit use of invasive species in required landscaping as part of the discretionary review of proposed development.

CWP Policy BIO-1.7 Remove Invasive Exotic Plants. Require the removal of invasive exotic species, to the extent feasible, when considering applicable measures in

discretionary permit approvals for development projects unrelated to agriculture, and include monitoring to prevent re-establishment in managed areas.

SGVCP Policy ER-1.7 Use of Native Plant Landscaping. *Encourage the use of native plants to preserve the rural character of the Valley and to support wildlife needs. Landscaping which changes the historical character of viewsheds and open space is discouraged.*

Consistent with Incorporation of Mitigation. As discussed in Section IV.4, Biological Resources, the area proposed for development of the new fire station contains mostly non-native vegetation. Areas of native vegetation would be avoided, or where avoidance is not feasible, restored and compensated for through the implementation of identified mitigation measures. New landscaping around the fire station would comply with Marin County Fire Department Fire Protection Standard 220, Vegetation Management, which requires planting of non-invasive plants (Standard 220 is discussed further below). Other areas of the Project site would be managed by Marin County Parks as open space, in partnership with Trout Unlimited and with Marin Open Space Trust, which holds a Conservation Easement on the property, except the Clubhouse Parcel. A “Restoration and Reuse Vision Framework” has been prepared that will guide future use and restoration activities on the Property, providing for restoration of riparian areas along San Geronimo and Larsen Creeks, enhanced stream flows and improved water quality in the creeks, improved floodplain and ecosystem processes, upland wildlife habitat connectivity and linkages, public access, wildlife- and conservation-compatible recreational activities, and fire safety measures. With the mitigation measures described in Section IV.4, Biological Resources, and the provisions already in place for management and restoration of native vegetation, the Project would be consistent with policies for protection and enhancement of native vegetation.

Sensitive Species and Habitat

CWP Policy BIO-2.1 Include Resource Preservation in Environmental Review. *Require environmental review pursuant to CEQA of development applications to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors. Require adequate mitigation measures for ensuring the protection of any sensitive resources and achieving “no net loss” of sensitive habitat acreage, values, and function.*

CWP Policy BIO-2.4 Protect Wildlife Nursery Areas and Movement Corridors. *Ensure that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits, including consideration of cumulative impacts. Features of particular importance to wildlife for movement may include riparian corridors, shorelines of the coast and bay, and ridgelines. Linkages and corridors shall be provided that connect sensitive habitat areas such as woodlands, forests, wetlands, and essential habitat for special-status species, including an assessment of cumulative impacts.*

CWP Policy BIO-2.5 Restrict Disturbance in Sensitive Habitat During Nesting Season. *Limit construction and other sources of potential disturbance in sensitive riparian corridors, wetlands, and baylands to protect bird nesting activities. Disturbance should generally be set back from sensitive habitat during the nesting season from March 1 through August 1 to protect bird nesting, rearing, and fledging activities. Preconstruction surveys should be conducted by a qualified professional where development is proposed in sensitive habitat areas during the nesting season, and appropriate restrictions should be defined to protect nests in active use and ensure that any young have fledged before construction proceeds.*

CWP Policy BIO-3.1 Protect Wetlands. *Require development to avoid wetland areas so that the existing wetlands and upland buffers are preserved and opportunities for enhancement are retained (areas within setbacks may contain significant resource values similar to those within wetlands and also provide a transitional protection zone). Establish a Wetland Conservation Area (WCA) for jurisdictional wetlands to be retained, which includes the protected wetland and associated buffer area. Development shall be set back a minimum distance to protect the wetland and provide an upland buffer.*

SGVCP Policy ER-1.2 Protection of Natural Resources. *Areas where significant natural resources and features are identified shall be protected through appropriate land use policies and regulations. These resources include but are not limited to: wildlife habitat, vegetative cover, prominent open view areas and viewsheds, ridgelines, wetlands, watershed areas and creek zones, rock outcroppings, trails and open space.*

Consistent with Incorporation of Mitigation Measures. As stated in Section IV.4, Biological Resources, the area proposed for development of the new fire station contains mostly non-sensitive habitats and is not an important wildlife nursery area or wildlife movement corridor. Mitigation Measures included in Section IV.4 would ensure less-than-significant impacts to sensitive resources, including nesting birds and bats. Also as discussed in Section IV.10, Hydrology and Water Quality, the Project would not increase stormwater runoff or sediment delivery to San Geronimo Creek. As discussed in Section IV.4, Biological Resources, Project development may impact a small area of jurisdictional wetlands in the roadside ditch alongside Sir Francis Drake Blvd., potentially necessitating the County to obtain permits from the Army Corps of Engineers, the Regional Water Quality Control Board, and California Department of Fish and Wildlife that would delineate wetlands and require restoration or compensation for the loss of any jurisdictional wetlands. With implementation of the mitigations measures identified in Section IV.4 and adherence to regulatory requirements for protection of wetlands and compensatory mitigation for unavoidable loss of wetlands, the Project would be consistent with policies for the protection of sensitive species and habitats.

Tree Protection

CWP Policy BIO-1.3 – Protect Woodlands, Forests, and Tree Removal. *The County shall strive to protect large trees, trees with historical importance, and oak woodland habitat, and prevent the untimely removal of trees through implementation of tree preservation ordinance.*

SGVCP Policy ER-1.8 Tree Preservation. *The intent of this policy is to protect, where possible, the populations, groves, and heritage specimens of native tree species. These species include, but are not limited to coast live oak, redwood, and madrone, and habitat for resident and migratory wildlife species that they support. Native trees should be protected from removal or destruction; (removal may be necessary for fire safety purposes). If trees must be removed in order to permit reasonable development, the County should require the installation of fire resistive native trees when appropriate for the site conditions (particularly with regard to fire safety).*

Consistent with Incorporation of Mitigation. The area proposed for the development of the new fire station facilities has been previously disturbed, and contains little native vegetation, apart from planted landscape trees. The proposed development would likely require the removal of several of these trees, as described in Section IV.4, Biological Resources. Mitigation measures included in that section would ensure that loss of native trees is compensated for by replacement planting within the Project site, rendering the Project consistent with policies for tree protection.

Air Quality

CWP Policy AIR-1.2: *Seek to attain or exceed the more stringent of federal or State Ambient Air Quality Standards for each measured pollutant.*

CWP Policy AIR-1.3: *Require projects that generate potentially significant levels of air pollutants, such as quarry, landfill operations, or large construction projects, to incorporate best available air quality mitigation in the project design.*

Consistent with Incorporation of Mitigation. As discussed above in Section IV.3, Air Quality, with inclusion of mitigation measures to reduce construction-related emissions, air quality impacts would be less than significant. With these measures, the Project would be consistent with the identified policies.

Climate Change

CWP Policy AIR-4.1 Reduce Greenhouse Gas Emissions. *Adopt practices that promote improved efficiency and energy management technologies; shift to low-carbon and renewable fuels and zero emission technologies.*

Consistent. As discussed in Section IV.8, Greenhouse Gas Emissions, construction under the Project would with the Marin County Green Building Code, which would ensure that construction and use of the new fire station and Fire Department Headquarters minimizes GHG emissions. Section IV.8 finds that the Project would not result in significant increases in GHG emissions, nor would it conflict with existing plans or policies to reduce such emissions, including policies contained in the CWP and in Climate Action Plan 2030.

Seismic Safety

CWP Policy EH-2.1 Avoid Hazard Areas. Require development to avoid or minimize potential hazards from earthquakes and unstable ground surfaces.

CWP Policy EH-2.3 Ensure Seismic Safety of New Structures. Design and construct all new buildings to be earthquake resistant. The minimum level of design necessary would be in accordance with seismic provisions and criteria contained in the most recent version of the State and County Codes. Construction would require effective oversight and enforcement to ensure adherence to the earthquake design criteria.

SGVCP Policy NH-1.1 Regulation of Development. In areas where conditions such as soil stability, geologic and seismic conditions, and hydrology present potential threats to life, health, and the environment, development shall be restricted to very low densities, designed to minimize or eliminate the hazard.

SGVCP Policy NH-4.2 Emergency buildings and Vital Utilities. The County Community Development Agency in conjunction with the Department of Public Works should ensure that emergency buildings and vital utilities, communication systems, and transportation systems are located and constructed so that they remain operational during and after a major earthquake.

Consistent. As discussed in Section IV.7, Geology and Soils, the area proposed for development of the new fire station is not within a geologic hazard area. Like the entire Bay Area, the Project site is subject to strong ground shaking during an earthquake. The California Building Code (CBC), as adopted by Marin County, requires design and construction of buildings intended for human occupancy to withstand the anticipated ground motion generated during a large earthquake with minimal damage and without structural collapse. Furthermore, as Essential Service Buildings, the new fire station buildings, as well as the remodeled clubhouse, would be constructed to the higher State standards required for emergency facilities, ensuring both life safety and the ability of the buildings to function following an earthquake. The Project would, therefore, be consistent with these policies.

Fire Safety

CWP Policy EH-4.1 Limit Risks to Structures. Ensure that adequate fire protection is provided in new development and when modifications are made to existing structures.

CWP Policy EH-4.5 Regulate Land Uses to Protect from Wildland Fires. Land use regulations, including but not limited to subdivision approvals and denials, as means of protecting people and property from hazards associated with wildland fires.

Consistent. As discussed in Section IV.20, Wildfire, most of the Project site is located within the wildland-urban interface (WUI). The area proposed for development of the new fire station, and the area around the clubhouse, have been previously developed and landscaped. The relatively flat topography and managed vegetation reduce fire hazard. The proposed new and remodeled facilities would be designed and constructed

to meet Building Code requirements for fire safety, including compliance with California Building Section 7a, Materials and Construction Methods for Exterior Wildfire Exposure and landscaping that complies with County Fire Protection Standard 220, Vegetation Management. Adherence to Standard 220 and Building Code standards for fire safety, and the presence post-construction of a state-of-the-art fire station on the Project site, would ensure that the Project is consistent with these policies.

Historical and Archaeological Resources

CWP Policy HAR-1.1 Preserve Historical and Archaeological Resources. Identify archaeological and historical resource sites.

SGVCP Policy CD-2.1 Protection of Historical Landmarks. Consistent with Countywide Plan policies, historical landmarks and buildings should be preserved.

SGVCP Policy CD-2.2 Archaeological Sites. Through conditions of project approval, the County Community Development Agency shall ensure that development does not impact archaeological sites.

Consistent with incorporation of mitigation measures. As discussed in Section IV.5, Cultural Resources, site studies have revealed no known historical or archaeological resources within the area proposed for development of the new fire station facilities. Mitigation measures included in Section IV.5 would reduce the potential for impacts to previously undiscovered archaeological resources, and would require a historical resources evaluation of buildings within the Project site prior to alteration or demolition (the former clubhouse building has already been evaluated and has been found not to be an historical resource). With these mitigation measures, the Project would have less-than-significant impacts on historical and archaeological resources, and would be consistent with these policies.

Design and Aesthetics

CWP Policy DES-1.1, Address Design at the Community Level. Use community plans to regulate building design and protect key resources. Encourage cities and towns to address design issues.

CWP Policy DES-4.1 Preserve Visual Quality. Protect scenic quality and views of the natural environment — including ridgelines and upland greenbelts, hillsides, water, and trees — from adverse impacts related to development.

SGVCP Policy ER-1.3 Protection of Ridgelines. Ridgelines, including flat grassy meadows on the top of ridges, shall be protected and development shall be consistent with the Design Criteria set forth in the Countywide Plan Policies EQ 3.18 through EQ 3.20.

SGVCP Policy CD-1.1 Protection of Natural Site Amenities. All land use decisions within the Planning Area will take into consideration the protection and preservation of unique natural site amenities including hillsides, ridges, water courses, stands of

significant trees, rock outcroppings and other natural features which reinforce the character of the San Geronimo Valley.

SGVCP Policy CD-1.2 Maintain the Rural Character of the Valley. *New commercial or residential development shall be designed to maintain the rural character of the Valley. The County Community Development Agency shall review development proposals submitted for design review for consistency with the programs listed below.*

SGVCP Policy CD-1.7 Intensity of Development. *Allowable uses and intensity of development in the San Geronimo Valley Community Plan area should protect natural features, open views, farming, and character of the rural villages.*

SGVCP Policy CD-1.10 Multiple Building Projects. *Repetitive design in multiple building projects should be avoided. Variation of detail, form (bulk, height, mass, and scale), and siting should be used to provide visual interest. The clustering of buildings to protect views and preserve open space is encouraged.*

SGVCP Policy CD-1.12 Minimize Access Points and Visual Impacts. *The number of new access points to Sir Francis Drake Boulevard should be minimized and views of the Valley from Sir Francis Drake Boulevard should be preserved to the extent feasible.*

Consistent. *As discussed in Section II.F, Project Description, there is currently no architectural design for the new fire station facilities. The County plans to engage the community in the design process, providing opportunity for public input to select a design that is compatible with the character of the San Geronimo Valley, and ensuring consistency with these policies.*

Emergency Preparedness and Response

CW Plan Policy PS-3.1. Plan Thoroughly for Emergencies. *Ensure that the County, its citizens, businesses, and services are prepared for effective response and recovery in the event of emergencies or disasters.*

SGVCP Policy CF-4.1 Fire, Sheriff, California Highway Patrol, Paramedic, and Social Services. *The County should maintain existing service levels in San Geronimo Valley and increase services when necessary.*

Consistent. *The Project would provide state-of-the-art emergency response facilities and would enhance the existing service levels in the San Geronimo Valley.*

Open Space and Recreation

CWP Policy OS-1.1 Enhance Open Space Stewardship. *Promote collaborative resource management among land management agencies. Monitor resource quality. Engage the public in the stewardship of open space resources.*

CWP Policy OS-1.2 Protect Open Space for Future Generations. *Ensure that protected lands remain protected in perpetuity, and that adequate funding is available to maintain it for the benefit of residents, visitors, wildlife, and the environment.*

CWP Policy TRL-1.2 Expand the Countywide Trail System. *Acquire additional trails to complete the proposed countywide trail system, providing access to or between public lands and enhancing public trail use opportunities for all user groups, including multi-use trails, as appropriate.*

SGVCP Policy CD-7.1 Trails and Open Space. *Assure a network of trails throughout the valley within and between the villages, on the ridges and valley floor and from valley to ridges providing recreational opportunities.*

SGVCP Policy CD-7.3 San Geronimo Valley Golf Course. *Major changes in the use of the San Geronimo Golf Course should be evaluated by a master plan which could address traffic and other impacts as well as the rural character of the Valley.*

SGVCP Policy CF-1.1 Recreational Opportunities. *The County should encourage the establishment of public open spaces within each of the villages for recreational use.*

Consistent. The Project would preserve most of the Project site as open space, with trails, a community garden, and recreational opportunities open to the public. The proximity of the Project site to the village of San Geronimo will increase the availability of readily accessible trails to the community. The golf course closed several years ago.

Conclusion: With implementation of the mitigation measures cited in the discussion above, the Project would be generally consistent with relevant CWP and SGVCP policies. Therefore, this impact would be less than significant.

c) Result in substantial alteration of the character or functioning of the community, or present planned use of an area?

The Project site is a former golf course, but the golf course closed in 2018 and since then has been managed by the current owner, Trust for Public Land, largely as open space open for public use for passive recreation. The former clubhouse building has already been repurposed and is used by Marin County Fire Department under a lease agreement. There is a community garden within the Project site. The parking lot next to the clubhouse building is used as a trailhead for a trail into Roy's Redwoods Preserve, which has limited parking at the formal trailhead on Nicasio Valley Road. These uses, which have become a part of the character and functioning of the San Geronimo Valley community, would all continue under the Project, unchanged. Development of the proposed new fire station facilities would alter the character and functioning of the portion of the Clubhouse Parcel upon which it would be located, but would not affect the remainder of the Project Site or the community at large. The Project would provide an upgrade to essential emergency services, and therefore would contribute to the resiliency and long-term viability of the community. There would be no adverse impact of this kind.

d) Conflict with applicable Countywide Plan designation or zoning standards?

The Project site is located in unincorporated Marin County, and is subject to the County's land use plans, policies, and regulations. The Project site is within the CWP's Inland-Rural Corridor. The land use designation is RC: Recreational Commercial. As described in the Community Development chapter of the CWP's Built Environment Element, "The Recreational Commercial land use category is established to provide for resorts, lodging facilities, restaurants, and privately owned recreational facilities, such as golf courses and recreational boat marinas." Map 7.10.0 in the CWP shows that Floor Area Ratios for the RC designation in the San Geronimo Valley are between .005 and .01: the designation allows only low-density development. The Project site is not within the Coastal Zone, it is not within a CWP Ridge and Upland Greenbelt, and it is not listed in the CWP Housing Element's site inventory.

The parcel's zoning is RCR – Resort and Commercial Recreation, one of the zoning categories listed as consistent with the R-C designation. As stated in Development Code Sec. 22.12.020(H), "[t]he RCR zoning district is intended to create and protect resort facilities in pleasing and harmonious surroundings with emphasis on public access to recreational areas within and adjacent to developed areas." Setbacks in this district are determined through the Master Plan, Precise Development Plan, or Design Review process. Building heights are limited to 30 feet for primary structures and 15 feet for accessory structures. Principally permitted uses include community gardens, small and medium wind energy conversion systems (WECS), adult day programs, affordable housing, accessory retail uses, bars and drinking places, restaurants, bed and breakfast inns, hotels and motels, and service stations. Dwellings, other than affordable housing, are not permitted. There are a number of conditionally permitted uses in the RCR zoning district, including recreational, entertainment, and cultural facilities, cemeteries and mortuaries, commercial solar facilities, public utility facilities, and public safety facilities, such as fire stations.

While public safety facilities are a conditionally permitted use in the RCR District, the Project would not require a land use permit, as governmental activities and development in the County and other governmental agencies on land owned or leased by a governmental agency are exempt from land use permits (Marin County Code 22.06.050(B)). Similarly, standards for the land use designation and zoning district are not binding on the County for its own projects. The Project, including development of the proposed new fire station facilities and maintenance of most of the remaining areas of the Project site as open space open to the public, and proposing continuation of existing uses and development of new, low density public facilities, is generally consistent with the Countywide Plan designation and zoning for the Project site.

In conclusion, the proposed Project is largely consistent with CWP designation and zoning standards for the Project site.

References

Marin County. 1997. San Geronimo Valley Community Plan. Adopted by the Marin County Board of Supervisors, December 2, 1997.

Marin County, 2007. Marin Countywide Plan. Prepared by the Marin County Community Development Agency and adopted by the Board of Supervisors, November 6, 2007.

Marin County, 2021. Marin County Code, Title 22, Development Code.

12. Mineral Resources

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

There are no known mineral resource deposits within the Project site. The Project therefore would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. There would be no impact of this kind.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The State Mining and Geology Board report, “Updated Designation of Regionally Significant Aggregate Resources in the North San Francisco Bay Production-Consumption Region, Marin, Napa, Sonoma, and Southwestern Solano Counties, California” (SMGB, 2018) shows that the Project site is not within or nearby any designated regionally significant aggregate resource areas. Likewise, Marin Countywide Plan Map 3-5 does not show any permitted Mineral Resource Sites or State-Designated Mineral Resource Preservation Sites in or around the Project Site. The Project therefore would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. There would be no impact of this kind.

References

Marin County, 2007. Marin Countywide Plan. Prepared by the Marin County Community Development Agency and adopted by the Board of Supervisors, November 6, 2007.

State Mining and Geology Board (SMGB), 2018. Updated Designation of Regionally Significant Aggregate Resources in the North San Francisco Bay Production-Consumption Region, Marin, Napa, Sonoma, and Southwestern Solano Counties, California. Department of Conservation, Natural Resources Agency, January 2018. SMGB Designation Report No. 17.

13. Noise

<i>Would the project result in:</i>		Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound pressure level has become the most common descriptor used to characterize the “loudness” of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Decibels are measured using different scales, and it has been found that A-weighting of sound levels best reflects the human ear’s reduced sensitivity to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A-weighted sound level over a given time period (Leq)³⁶; average day–night 24-hour average sound level (Ldn)³⁷ with a nighttime increase of 10 dB to account for sensitivity

³⁶ The Equivalent Sound Level (Leq) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time-varying sound energy in the measurement period.

³⁷ Ldn is the day–night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

to noise during the nighttime; and community noise equivalent level (CNEL)³⁸, also a 24-hour average that includes both an evening and a nighttime sensitivity weighting. **Table IV13-1** identifies decibel levels for common sounds heard in the environment.

Table IV.13-1. Typical Noise Levels

Noise Level (dB)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock Band
80-90	Diesel truck at 50 feet	Loud television at 3 feet
70-80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60-70	Commercial area	
40-60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20-40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10-20		Broadcast / recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

Source: (modified from Caltrans Technical Noise Supplement, 1998a)

Noise Attenuation

Stationary point sources of noise, including construction equipment, attenuate (lessen) at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots or smooth bodies of water) and therefore have less attenuation (6.0 dB per doubling). A street or roadway with moving vehicles (known as a “line” source), would typically attenuate at a lower rate, approximately 3 to 4.5 dB each time the distance doubles from the source, that also depends on ground absorption (Caltrans, 1998b). Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, would increase the attenuation that occurs by distance alone.

Regulatory Context

Marin Countywide Plan Noise Element (Section 3.10)

The Noise Section (3.10) of the Built Environment Element of the Marin Countywide Plan (CWP) contains policies and programs intended to maintain appropriate noise levels and protect noise-sensitive land uses in the County. The following goals and policies are relevant to the Project:

³⁸ CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10–decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

Goal NO-1: Protection from Excessive Noise. Ensure that new land uses, transportation activities, and construction do not create noise levels that impair human health or quality of life.

Policy NO-1.1: Limit Noise from New Development. Direct the siting, design, and insulation of new development to ensure that acceptable noise levels are not exceeded.

Policy NO-1.i: Regulate Noise Sources. Sections 6.70.030(5) and 6.70.040 of the Marin County Code establish allowable hours of operation for construction-related activities (Monday through Friday 7 a.m. to 6 p.m., Saturday 9 a.m. to 5 p.m.). As a condition of permit approval for Projects generating significant construction noise impacts during the construction phase, construction management for any Project shall develop a construction noise reduction plan and designate a disturbance coordinator at the construction site to implement the provisions of the plan.

The Noise Section of the CWP includes benchmarks for allowable noise exposure from stationary noise sources (**Table IV13-2**), and states that these standards shall apply to new stationary noise-generating development proposed near existing residential or other noise-sensitive land uses.

Table IV.13-2. Benchmarks for Allowable Noise Exposure from Stationary Sources

	Daytime (7 A.M. to 10 P.M.)	Nighttime (10 P.M. to 7 A.M.)
Hourly Leq, dB	50	45
Maximum Level, dB	70	65
Maximum Level, dB (Impulsive Noise)	65	60

Notes:

Leq (“Equivalent Sound Pressure Level”) is the constant sound energy that would produce the same noise level as actual sources that are fluctuating during the specified time period (one hour).

1. The measurements are made at the property line of the receiving land use. The effectiveness of noise mitigation measures should be determined by applying the standards on the receptor side of noise barriers or other property line noise mitigation measures.
2. The night-time standards apply only when the receiving land use operates or is occupied during nighttime hours.
3. Sound-level measurements to determine maximum level noise shall be made with “slow” meter response.
4. Sound-level measurements for impulsive noise sources shall be made with “fast” meter response. Impulsive noises are defined as those that have sharp, loud peaks in decibel levels but that quickly disappear. Examples include a dog’s bark, a hammer’s bang, and noise with speech or music content.
5. The allowable noise level standard shall be raised to the ambient noise level in areas where the ambient level already exceeds the standards shown in this table. For example, if the neighborhood already experiences daytime hourly noise levels of 60 dBA as an ambient condition, the noise level standard shall be raised to 60 dBA.
6. The allowable noise level shall be reduced 5 dB if the ambient hourly Leq is at least 10 dB lower than the noise-level standard shown in this table. For example, if the neighborhood experiences daytime hourly noise levels of 40 dBA as an ambient condition, the noise level standard shall be lowered to 45 dBA.

SOURCE: Marin Countywide Plan, Section 3.10 Noise Element, Figure 3-43

Marin County Municipal Code

The Marin County Municipal Code § 6.70.030(5) establishes allowable hours of operation for construction-related activities.

- a. Hours for construction activities and other work undertaken in connection with building, plumbing, electrical, and other permits issued by the community agency shall be limited to the following:
 - i. Monday through Friday: 7 a.m. to 6 p.m.
 - ii. Saturday: 9 a.m. to 5 p.m.
 - iii. Prohibited on Sundays and Holidays (New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.)
- b. Loud noise-generating construction-related equipment (e.g., backhoes, generators, jackhammers) can be maintained, operated, or serviced at a construction site for permits administered by the community development agency from 8 a.m. to 5 p.m. Monday through Friday only.
- c. Special exceptions to these limitations may occur for:
 - i. Emergency work as defined in § 22.130.030 of the Municipal Code provided written notice is given to the community development director within forty-eight hours of commencing work;
 - ii. Construction Projects of city, county, state, other public agency, or other public utility;
 - iii. When written permission of the Community Development Director has been obtained, for showing of sufficient cause;
 - iv. Minor jobs (e.g., painting, hand sanding, sweeping) with minimal/no noise impacts on surrounding properties;
 - v. Modifications required by the review authority as a discretionary permit condition of approval.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others due to the amount of noise exposure, in terms of both duration and insulation from noise, and the types of activities typically involved. Residences, hospitals, schools, and nursing homes are generally more sensitive to noise than commercial and industrial land uses. The Noise Section (3.10) of the CWP is primarily concerned with impacts to noise-sensitive residential development. This analysis will also consider schools, libraries, churches, hospitals, and nursing homes as noise-sensitive receptors. The nearest noise

sensitive receptors are a residence located approximately 80 feet west of the Project site; San Geronimo Community Church, located approximately 180 feet southwest of the Project site; and San Geronimo Preschool located approximately 270 feet southwest of the Project site.

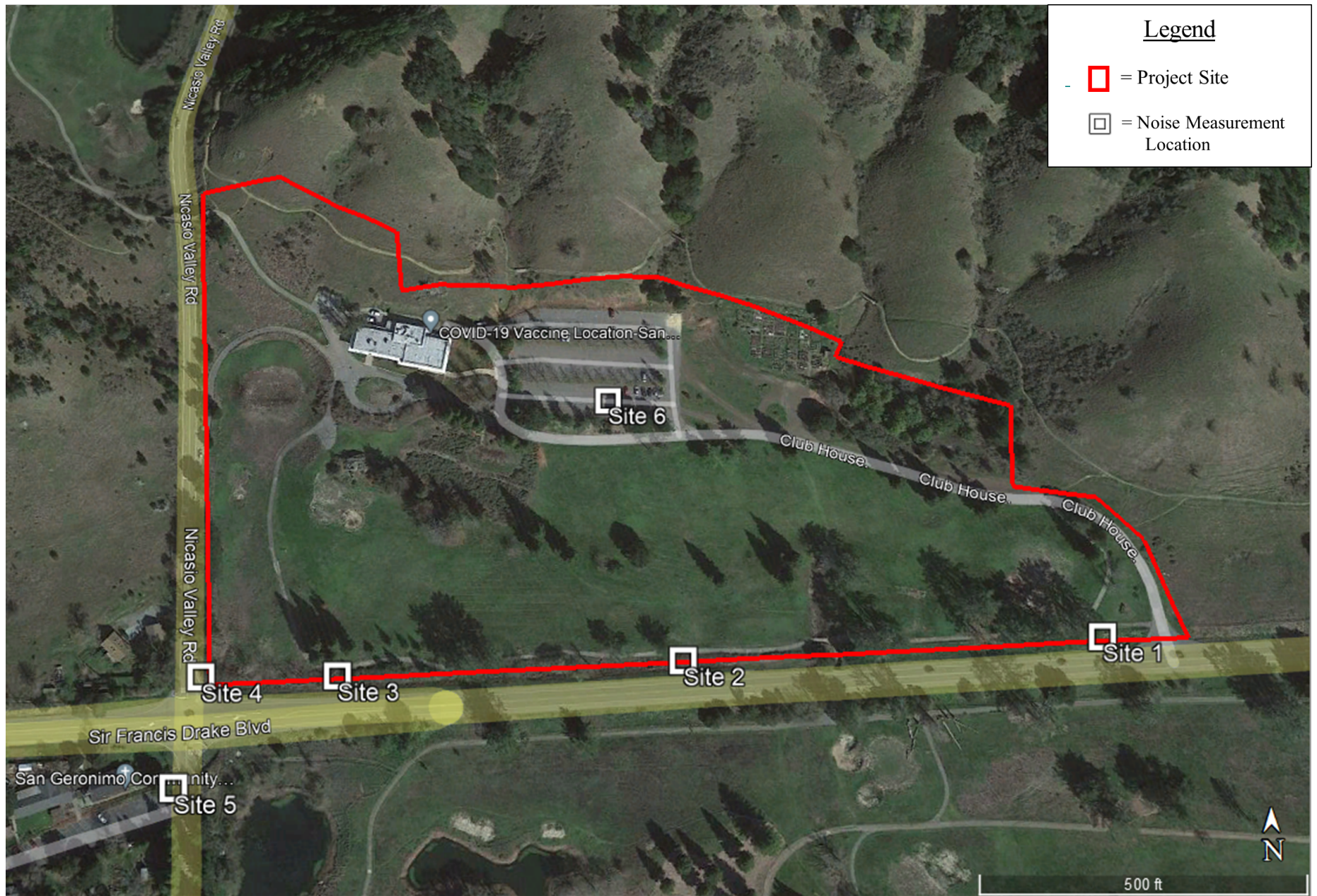
Methodology and Existing Noise Environment

To quantify existing ambient noise levels, six short-term (10-minute) noise measurements were taken in and around the Project site using a Larson Davis SoundTrack LxT Sound Level Meter. **Table IV.13-3** summarizes the noise measurement results. **Figure IV.13-1** shows the noise measurement locations. Based on observations from the short-term measurements, the main source of existing noise in the Project vicinity is traffic noise from Sir Francis Drake Blvd, traffic noise from Nicasio Valley Road, traffic noise from San Geronimo Valley Drive, landscaping crews cutting down trees with chainsaws, and parking lot noise.

Table IV.13-3. Existing Noise Levels

Location	Time Period	Noise Levels (dB)	Noise Sources
Site 1: Southeastern boundary of Project site, nearby clubhouse access road, approximately 40 feet north of centerline of Sir Francis Drake Blvd.	Tuesday June 7, 2023 10:38 a.m. to 10:48 a.m.	5-minute Leq's: 65, 64	Traffic noise on Sir Francis Drake Blvd was 69-79 dB. A landscaping crew cutting down trees with a chain saw south of Sir Francis Drake Blvd was 53-55 dB.
Site 2: Southern boundary of Project site, approximately 40 feet north of centerline of Sir Francis Drake Blvd.	Tuesday June 7, 2023 10:50 a.m. to 11:00 a.m.	5-minute Leq's: 61, 64	Traffic noise on Sir Francis Drake Blvd was 69-74 dB.
Site 3: Southwest area of the Project site, approximately 50 feet north of centerline of Sir Francis Drake Blvd.	Tuesday June 7, 2023 11:01 a.m. to 11:11 a.m.	5-minute Leq's: 60, 66	Traffic noise on Sir Francis Drake Blvd 68-82 dB.
Site 4: Intersection of Sir Francis Drake Boulevard and Nicasio Valley Road, adjacent to residence.	Tuesday June 7, 2023 11:15 a.m. to 11:25 a.m.	5-minute Leq's: 62, 64	Traffic noise on Sir Francis Drake Blvd was 68-75 dB. Traffic turning from Sir Francis Drake Blvd northbound on Nicasio Valley Road was 73-82 dB.
Site 5: Intersection of Sir Francis Drake Boulevard and San Geronimo Valley Drive, adjacent to San Geronimo Community Church.	Tuesday June 7, 2023 12:00 p.m. to 12:10 p.m.	5-minute Leq's: 61, 64	Traffic noise on Sir Francis Drake Blvd was up to 70-75 dB. Traffic turning from Sir Francis Drake Blvd southbound on San Geronimo Valley Drive was 70-76 dB.
Site 6: Parking lot area.	Tuesday June 7, 2023 11:35 a.m. to 11:45 a.m.	5-minute Leq's: 63, 55	Parking lot noise was 62-68 dB.

Source: RCH Group, 2023



SAN GERONIMO FIRE STATION INITIAL STUDY

Source: RCH Group, Google Earth

Figure IV.13-1
Noise Measurement Locations

Significance Thresholds

Appendix G of the State *CEQA Guidelines* states that a Project would result in a significant impact to Noise if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
 - Temporary construction noise impacts would be potentially significant if project construction conflicts with the adopted construction hours in Marin County. Construction is allowed weekdays between the hours of 7:00 a.m. and 6:00 p.m. and on Saturdays between the hours of 9:00 a.m. and 5:00 p.m. No construction is permitted on Sundays or on holidays.
 - Operational noise impacts would be potentially significant if any proposed stationary equipment exceeds noise limits for stationary equipment in Table IV.13-2. As stated in Table IV.13-2, stationary equipment shall not exceed a daytime hourly (7:00 a.m.–10:00 p.m.) outdoor noise level of 50 dB, Leq or a nighttime hourly (10:00 p.m.–7:00 a.m.) outdoor noise level of 45, dB Leq as measured at the receiving property.
 - For traffic related noise, impacts are considered significant if implementation of the project would result in an increase of the noise level by 3 dB, CNEL or more on local roadways.
- Generate excessive groundborne vibration or groundborne noise levels; or
 - For vibration, a peak particle velocity (ppv) threshold of 0.5 inches per second or greater can cause architectural damage and minor structural damage. Caltrans recommends a vibration threshold of 0.5 ppv (inches per second) for modern residential and commercial structures (Caltrans, 2002). Vibration generated from construction in excess of Caltrans recommended thresholds would result in a potentially significant vibration impact.
- For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose persons residing or working in the project area to excessive noise levels.

- a) **Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Construction Impacts

Construction would result in a temporary increase in ambient noise levels in the vicinity of the Project. Construction is expected to occur between the hours of 7 a.m. to 6 p.m., Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays, consistent with the adopted construction hours in Marin County. Construction activities would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., excavators, loaders, etc.) and other construction equipment (e.g., scrapers, dozers,

compactors, trucks, etc.). The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment, and the prevailing wind direction.

Construction activities could occur as close as approximately 440 feet from the nearest residence on Sir Francis Drake Boulevard (Blvd). Typical maximum noise levels at 50 feet and 440 feet for various types of construction equipment that could be used during Project construction are provided in **Table IV.13-4**.

Table IV.13-4. Typical Noise Levels from Construction Equipment (Lmax)

Construction Equipment	Noise Level (dB, Lmax at 50 feet)	Noise Level (dB, Lmax at 440 feet ¹)
Air Compressor	78	54
Backhoe	78	54
Excavator	81	57
Dozer	82	58
Front End Loader	79	55
Compactor	83	59
Water Truck	80	56
Crane	81	57
Manlift	75	51
Welder/Torch	74	50
Pneumatic Tools	85	61
Dump Truck	76	52
Concrete Mixer Truck	79	55

NOTES:

1. An attenuation rate of 7.5 per doubling of distance was used to convert the FHWA construction equipment noise levels at 50 feet to the noise levels at 440 feet.

L_{max} = maximum sound level

Source: Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide, 2006.

All construction activities would be required to occur between the hours of 7 a.m. to 6 p.m., Monday through Friday, and 9 a.m. to 5 p.m. on Saturdays to comply with the established hours of construction in Marin County. Therefore, construction noise would result in a less-than-significant impact.

Operational Impacts

Traffic Noise Impacts

A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level. The Project would result in increased fire truck (and siren) use on nearby roads. However, increased use of fire trucks and other

emergency vehicle use would not double the existing traffic on San Francis Drake Blvd and other nearby local roadways. RCH previously recorded noise from a fire truck traveling at high speed (with sirens on) at 86 dB at approximately 150 feet away from the fire truck. Noise levels from fire trucks (and other emergency vehicles) reaching nearby sensitive receptors would depend on what roads these vehicles would travel on to address an emergency situation and how close to the road nearby sensitive receptors are located. Short-term noise from fire trucks and other emergency vehicles passing by would only last a few seconds and would contribute very little to average noise levels on nearby roadways and sensitive receptors. Thus, the increase of emergency vehicle use on nearby roadways would result in a negligible increase in roadway noise compared to existing traffic noise levels (see **Table IV.13-3** for existing noise levels on Sir Francis Drake Blvd and other local roadways). Therefore, operational traffic noise would result in a less-than-significant impact.

Stationary Equipment Noise Impacts

The Project would include stationary mechanical equipment including heating, ventilating and air conditioning equipment (HVAC). Noise generated by HVAC varies significantly depending on the equipment type, capacity, location and enclosure design. Noise levels up to 60 dBA at a distance of 15 feet are typical for HVAC equipment (Illigworth and Rodkin, Inc. 2009). Final Project design would comply with the County benchmarks for allowable noise exposure from stationary noise sources (see Table IV.13-2) and would implement design features for mechanical equipment to not exceed the County noise limits. The final design of any stationary equipment would need to meet the most conservative threshold, which is the maximum nighttime (10:00 p.m.–7:00 a.m.) outdoor noise level of 45 dBA as measured at the adjacent receiving property. Thus, the Project would not generate noise levels that would conflict with the noise standards in Table IV.13-2. Therefore, noise impacts from stationary equipment from the Project would result in a less-than-significant impact.

b) Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Project construction would not require significant sources of vibration such as pile driving or blasting. In most cases, vibration induced by typical construction equipment does not result in adverse effects on people or structures (Caltrans, 2013). Vibrational effects from typical construction activities are only a concern within 25 feet of existing structures (Caltrans, 2002). There are no structures within 25 feet of the Project site. Therefore, vibration would have a less-than-significant impact.

- c) For a Project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?**

The Project site is approximately 7.5 miles west of San Rafael Airport, the nearest airport. There is not an adopted airport land use plan for the San Rafael Airport. However, the Project site is not within any noise contours shown in Map 3-16 (San Rafael Airport Noise Contours) of the Marin Countywide Plan Noise Element (Section 3.10). The contours shown in Map 3-16 indicate the Project site is located outside the 55 dB, CNEL aircraft noise contour. Therefore, there would be no impact of this kind.

References

California Department of Transportation (Caltrans). 1998a. *Technical Noise Supplement*.

California Department of Transportation (Caltrans). 1998b. *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*.

California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement*.

California Department of Transportation (Caltrans). 2002. *Transportation Related Earthborne Vibrations*.

Federal Highway Administration (FHWA). 2006. *Roadway Construction Noise Model User's Guide*.

Illingworth and Rodkin, 2009. *Walmart Expansion, Williamson Ranch Plaza, Environmental Noise Assessment*. 2009.

Marin County, 2007. Marin Countywide Plan. Prepared by the Marin County Community Development Agency and adopted by the Board of Supervisors, November 6, 2007.

14. Population and Housing

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Increase density that would exceed official population projections for the planning area within which the project site is located as set forth in the Countywide Plan and/or community plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Displace existing housing, especially affordable housing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in any physical changes which can be traced through a chain of cause and effect to social or economic impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project would provide upgraded emergency response facilities and open space in the San Geronimo Valley. As the new fire station facilities would replace existing facilities located a short distance away, the Project would not result in substantial new employment. The Project does not propose new homes or businesses, and would not extend roads or infrastructure. There would be no impact with respect to inducing substantial unplanned population growth.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project site contains no housing (other than the currently unused and derelict caretaker's cottage). The Project would not displace people or housing, and there would be no impact of this kind.

c) Increase density that would exceed official population projections for the planning area within which the project site is located as set forth in the Countywide Plan and/or community plan?

The Project does not propose constructing new or remodeled housing and would not increase population density. There would be no impact of this kind.

d) Displace existing housing, especially affordable housing?

The Project would not displace existing housing of any kind. There would be no impact of this kind.

e) Result in any physical changes which can be traced through a chain of cause and effect to social or economic impacts?

The Project would not displace or compete with any existing business or other land use. The Project would improve emergency response capacity and maintain open space and recreational opportunities for the community, which should both be social and economic benefits for the San Geronimo Valley. There is no reasonably foreseeable means by which the Project could be traced through chain of cause and effect to adverse social or economic impacts. There would be no impact of this kind.

15. Public Services

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities including roads?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

i) Fire protection?

The Project would provide state-of-the-art facilities for fire protection and other emergency services in the San Geronimo Valley and West Marin. As discussed elsewhere in this Initial Study, the Project would not result in significant environmental impacts. Impacts related to development of the new fire station and Fire Department Headquarters facilities would be less than significant.

ii) Police protection?

The Project would not result in increased population, commercial development or other land uses that would require an increase in police protection. There would be no impact of this kind.

iii) Schools?

The Project would not result in increased population that would require new or expanded schools. There would be no impact of this kind.

iv) Parks?

Most of the Project site would be managed by Marin County Parks as a park. Any changes made by County Parks to the Project site would be consistent with the terms of the existing Conservation Easement and would be beneficial for the environment. The Project would not result in increased population that would increase demand for new parks or usage of existing parks. There would be no impact of this kind.

v) Other public facilities including roads?

The Project would not result in increased population or increased development pressure, and so would not result in a need for other new or expanded public facilities. There would be no impact of this kind.

16. Recreation

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Most of the Project site is currently used as open space, with passive recreational opportunities including hiking, dog-walking, equestrian, and birdwatching. Other than the new fire station facilities and Fire Department headquarters, the Project site would be managed by Marin County Parks. Management would be consistent with the existing Conservation Easement on the property, which limits uses (see Section II.F, Project Description). Recreational use could increase, but would not be expected to result in substantial physical deterioration. The impact would therefore be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As discussed above, most of the Project site would become a County park. The new park would offer much the same passive recreational uses as the Project site currently does. New or expanded recreational facilities would not be required, and so the impact would be less than significant.

17. Transportation

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with State CEQA <i>Guidelines</i> Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) **Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

Regional Plans and Policies

Plan Bay Area 2050 (2021); In 2021, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 as the official regional long-range transportation and land use plan for the Bay Area (MTC and ABAG, 2021). Plan Bay Area 2050 seeks to make the region more affordable, connected, diverse, healthy, and vibrant, and relies on providing a shared vision and partnership with local agencies as well as advocacy groups and the private sector. Strategies in this plan include encouraging land use patterns that foster shared transportation modes, protect open space, lessen the share of single-occupancy work commutes, and reduce greenhouse gas emissions.

Transportation Authority of Marin (TAM) is the congestion management agency for Marin County and develops and updates its mandated short-range Congestion Management Program (CMP) every two years. The CMP describes strategies to assess and monitor the performance of the county's transportation system, address congestion, and improve performance of a multimodal system among local jurisdictions (Transportation Authority of Marin, 2021). Major developments that generate a net increase of more than 100 PM peak hour vehicle trips are subject to a CMP analysis and traffic impact study.

Marin County Plans and Policies

The Marin Countywide Plan (CWP), Built Environment Element, Transportation section, includes several transportation policies relevant to the Project. These include Policy TR-1.1 Manage Travel Demand; Policy TR-1.8 Reduce Vehicle Miles Traveled (VMT); Policy TR-2.1 Improve the Bicycle and Pedestrian Network; Policy; and Policy TR-4.3 Increase Clean-Fuel Vehicle Use.

Marin County's Climate Action Plan 2030 includes several strategies to reduce carbon intensity of transportation, including increasing use of zero emission vehicles (ZEVs), promoting bicycling, walking, and public transportation; and encouraging working remotely from home (teleworking).

All of the transportation plans and policies pertaining to the Project aim to reduce VMT, increase the use of shared vehicles (including public transit) and non-motorized transportation, and increase the share of VMT by lower emission or zero emission vehicles.

The Project site is in a small rural community, remote from population centers along the US101 corridor. Sir Francis Drake Blvd provides the primary access to the Project site. It has Class II bike lanes within the Ross Valley, which change to Class III signed bike routes near Baywood Canyon Road, about 3.5 miles east of the Project site (Transportation Authority of Marin, 2023). The signed bike route ends on the grade into the San Geronimo Valley, then restarts and diverts onto San Geronimo Valley Drive past the Project site. Many bicyclists, however, use the wide paved shoulders on Sir Francis Drake Blvd. past the Project site. Marin Transit line 68 has service from the San Rafael Transit Center to Inverness along Sir Francis Drake Blvd, with about 10 roundtrips per day.

Marin County currently offers a Ride Green Commute Alternatives Program that is available to employees (Marin County, 2023). The program aims to address the greenhouse gas impacts of County of Marin employees driving to work alone, by encouraging employees to use alternatives to single occupancy vehicles. The program offers resources for using transit and vanpools, carpools, bicycles, and EVs. The Marin Commutes Rewards program, sponsored by TAM, allows anyone living or working in Marin County to earn up to \$500 per year for logging eligible green trips. Participants earn rewards for walking, biking, taking transit, carpooling and vanpooling, and working from home (Marin Commutes, 2023). These programs, for which MCFD employees are eligible, facilitate trip reduction and alternative transportation modes consistent with transportation plans and policies.

As discussed in Section IV.8, Greenhouse Gases, the Marin County Green Building Code includes requirements for facilities to enable low-carbon transportation, including bicycle parking and electric vehicle (EV) charging stations (MCFD already has several EVs in its vehicle fleet). Compliance with these requirements will ensure that the Project site facilitates low-carbon transportation alternatives.

While alternative transportation opportunities are limited for the Project due to its remote location, existing transportation alternatives, County and TAM incentives to use alternative transportation, and Green Building requirements would ensure that the Project does not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The impact would be less than significant.

b) Would the Project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?

Senate Bill 743, signed into law in 2013, mandated a change in analysis of transportation impacts in CEQA documents, to utilize vehicle miles traveled (VMT), as opposed to vehicle flow or traffic congestion, as a more appropriate metric for assessing transportation impacts, in line with goals of helping to achieve climate commitments, improving health and safety, and prioritizing co-located land uses. VMT is calculated based on the sum of individual vehicle trips generated and their associated trip lengths. The use of VMT as a performance measure allows for the evaluation of fuel consumption by motor vehicles for distances traveled and impacts associated with greenhouse gas (GHG) emissions.

In December 2018, the Governor's Office of Planning and Research (OPR) published its *Technical Advisory on Evaluating Transportation Impacts in CEQA* ("Technical Advisory"; Governor's Office of Planning and Research, 2018). These guidelines direct lead agencies on how to evaluate project transportation impacts on the basis of VMT, as required by Senate Bill 743. The Technical Advisory includes guidelines for agencies to establish VMT screening thresholds to facilitate rapid identification of projects that are expected to cause a less-than-significant impact. If projects meet any of the screening criteria, they are considered to be "screened-out," and it is presumed that VMT impacts would be less-than-significant. One of the screening thresholds applies to the Project: small projects, defined as projects that generate fewer than 110 vehicle trips per day, are presumed not to have a significant impact with respect to VMT.

Because the Project would involve the relocation of existing fire station and MCFD headquarters functions from the Woodacre fire station to the Project site, which is less than 2 miles away, it would not be expected to generate new vehicle trips for employees, and trips to the new location would be about the same length as existing trips. Therefore, the Project would generate fewer than 110 vehicle trips per day, compared to the current condition, and trips would be about the same length, or slightly shorter. The Project, therefore, would not increase VMT and so would not conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b); the impact, if any, would be less than significant.

c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project proposes to develop a new egress driveway from the fire station directly onto Sir Francis Drake Blvd. This would be a wide driveway with flashing warning lights and an acceleration lane or apron on the shoulder of the roadway. This is a straight section of roadway, with long site distances. The Project would therefore not substantially increase traffic hazards; the impact would be less than significant.

d) Would the Project result in inadequate emergency access?

The proposed new fire station would have direct access onto Sir Francis Drake Blvd, near the intersection with Nicasio Valley Road. These are the major roadways through the San Geronimo Valley. Compared to the Woodacre fire station, emergency access to the service area would be improved, and average response times lessened. There would be no adverse impact of this kind.

References

California Governor's Office of Planning and Research, 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. Issued December 2018.

Marin Commutes, 2023. Marin Commutes Rewards.

<https://marincommutes.org/rewards/#:~:text=The%20Marin%20Commutes%20Rewards%20program,vanpooling%20%E2%80%94%20even%20working%20from%20home!>

Marin County, 2007. Marin Countywide Plan. Prepared by the Marin County Community Development Agency and adopted by the Board of Supervisors, November 6, 2007.

Marin County, 2023. Ride Green: Marin Commute Alternatives Program.

<https://www.hr.marincounty.org/learn-about-benefits/ridegreen>.

Metropolitan Transportation Commission and Association of Bay Area Governments. 2021. Plan Bay Area 2050, A Vision for the Future. Adopted October 2021.

Transportation Authority of Marin, 2021. 2021 Congestion Management Program, Final Draft Report. Issued September 2021.

Transportation Authority of Marin, 2023. Interactive GIS and Pedestrian Map.

<https://www.tam.ca.gov/bikepedmap/> Accessed October 18, 2023.

18. Tribal Cultural Resources

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) Would the Project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?				

- ii) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.**

As discussed in Section IV.5, Cultural Resources, a cultural resources assessment study completed in 2021 as part of the Environmental Constraints Analysis identified recorded archaeological sites within the Project site, but found no previously or newly identified archaeological or historical resources within the Clubhouse Parcel, where development of the new fire station facilities is planned (PaleoWest, 2021).

On April 20, 2023, the County sent an early AB 52 consultation notification about the Project to the Federated Indians of Graton Rancheria (FIGR), whose traditional territory includes the Project site. The County received no response. The County sent a follow-up consultation notification to FIGR on September 7, 2023 with additional Project information that was not yet available during the initial consultation outreach. FIGR responded to the second consultation notification on September 8, 2023, requesting a consultation meeting related to the Project. On October 12, 2023, the County participated in a Tribal consultation meeting with FIGR. FIGR had participated in the monitoring of stream restoration work conducted on the larger Project site in 2020-21, but Tribal representatives did not identify any known or potential Tribal Cultural Resources within the Clubhouse Parcel. Based on the entirety of the record, there is no information that indicates the presence of Tribal Cultural Resources within the Clubhouse Parcel. Therefore, based on the results of the cultural resources assessment study and the Tribal consultation meeting, the Project, which would involve disturbance only within the Clubhouse Parcel, would not cause a substantial adverse change in the significance of any known Tribal Cultural Resource.

Inadvertent discovery of cultural resources during Project construction is identified as a potentially significant impact in Section IV.5, Cultural Resources. Inadvertently discovered cultural resources could be considered Tribal Cultural Resources. Disturbance, damage, or destruction of previously unknown resources during Project construction could result in a substantial adverse change in the significance of a Tribal Cultural Resource. Section IV.5, Cultural Resources, identifies three mitigation measures to reduce the potential for impacts to inadvertently discovered cultural resources. Mitigation Measure CUL-2 would require cultural resources sensitivity training for construction workers. Mitigation Measure CUL-3 would require proper procedures for assessing and treating inadvertently discovered cultural resources. Mitigation Measure CUL-4 would require that the cultural resources sensitivity training required by Mitigation Measure CUL-2 also include training for identification and treatment of inadvertently discovered human remains. These mitigation measures would reduce the potential for impacts to previously unknown cultural resources, including Tribal Cultural Resources, to less than significant.

References

PaleoWest, LLC, 2021 Archaeological Resources Constraints Analysis for the San Geronimo Golf Course Project, Marin County, California. Prepared for Sicular Environmental Consulting and Natural Lands Management. Technical Report No. 21-442. August 13, 2021

19. Utilities and Service Systems

<i>Would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) **Would the Project require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Water: Marin Municipal Water District supplies the Project site with water at a maximum allotment of 180.7 acre-feet per year (Nova Partners, 2017). This is well in excess of the requirements for the proposed use of the property. New or expanded water facilities would not be required.

Wastewater: The Project site has its own functioning on-site sewage treatment system (septic system) that serves the clubhouse building. The Project would likely require a new or expanded septic system, as discussed and analyzed in Section IV.7, Geology and Soils. Expansion or construction of off-site wastewater facilities would not be required.

Stormwater Drainage: The Project site has its own stormwater management system, which is not connected to any municipal system. As discussed in Section II.F, Project description and Section IV.10, Hydrology and Water Quality, the Project proposes new stormwater management facilities to comply with current regulatory requirements. Like the current system, the proposed new stormwater management system would not be connected to any municipal system.

Electric Power: A PG&E 60 kV transmission line passes through San Geronimo Valley. An electrical substation is located on San Geronimo Valley Drive, just west of the wastewater treatment plant (ArcGIS On-line, 2023). The clubhouse is provided with 240VAC service at 600 amps (Nova Partners, 2017). Electrical service to the clubhouse will likely be upgraded and modernized with remodeling of the building, and the fire station will likely require a new service connection. Given the proximity and size of existing electrical infrastructure, however, construction or relocation of new electric power facilities would not be required.

Propane (LPG): Currently, there is a propane tank at the former clubhouse building. With an emphasis on electric, rather than gas, appliances in the Marin County Green Building Code, gas use is expected to be minimal in the new and remodeled facilities, likely limited to propane (or diesel) fuel for an emergency back-up generator. No new or expanded gas facilities would be required.

Telecommunications: The clubhouse is currently served with a high-speed internet connection and telephone lines. Cellular phone service is available in San Geronimo Valley. No new or expanded telecommunications facilities would be required.

In sum, no new or expanded utility facilities would be required for the Project, and there would therefore be no associated adverse impact.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Water supply to the Project site is provided by Marin Municipal Water District (MMWD). According to MMWD's 2020 Urban Water Management Plan, MMWD expects available supplies to be sufficient to meet projected demands within its service area in all hydrologic conditions, including a five-year drought period, and considering the impacts of climate change (MMWD, 2021). Potential water quality issues are not expected to affect the quality of water served to the District's customers (ibid). The Project's impact on water supplies would therefore be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

San Geronimo Valley has no centralized wastewater treatment system. The Project site has an existing septic system, which will likely be expanded or replaced to provide

adequate wastewater treatment for the proposed new fire station. The Project would not be served by a wastewater treatment provider, and there would be no impact of this kind.

- d) **Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**
- e) **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

Solid waste collection in the San Geronimo Valley is provided by Recology Sonoma-Marín, with collection service including recyclable materials, compostable materials, and trash (Zero Waste Marin, 2023). Recology utilizes Redwood Landfill for disposal of solid waste and its own facility in Santa Rosa for processing recyclables. Compostables are delivered to the composting facility at Redwood Landfill or to other facilities in Contra Costa and Napa counties. Redwood Landfill is permitted to accept 1,390 tons per day of refuse for disposal, and has sufficient capacity through approximately 2040, given the most likely scenario for future waste receipts (R3 Consulting, 2018). The EarthCare Composting Facility, located on the landfill site, is permitted to receive up to 514 tons per day of material for composting (CalRecycle, 2023). Marin County is in compliance with State goals for reduction of landfilled solid waste, including the requirement to exclude compostable materials, including food waste, from landfill disposal. The former clubhouse building and the Woodacre Fire Station both receive collection services from Recology, which can be expected to continue under the Project. No substantial increase in waste generation, compared to the existing condition, would be expected to occur with the Project.

Project construction would be subject to the requirements of the Marin County Green Building Code, which requires recycling or salvaging of at least 65 percent of construction and demolition waste.

Since the Project would be served with the existing solid waste system, it would be in compliance with applicable federal, state, and local management and reduction statutes and regulations related to solid waste, and there would be no impact of this kind.

References:

ArcGIS On-Line, 2023. PG&E Transmission Network. On-line map accessed October 14, 2023.

CalRecycle, 2023. Solid Waste Information System: Redwood Landfill (21-AA-0001). <https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/1727> Accessed February 22, 2023.

Marin Municipal Water District, 2021. 2020 Urban Water Management Plan for Marin Municipal Water District. Prepared for MMWD by EKI Environment & Water, June 2021.

R3 Consulting, 2018. Remaining Landfill Capacity Projections for Redwood Landfill.
Memo from Emily Ginsburg, Senior Analyst, to Judith Silver, Marin County Public
Works, March 30, 2018.

Zero Waste Marin, 2023. Who is my hauler? <https://zerowastemarin.org/residents/who-is-my-hauler/> Accessed October 18, 2023.

20. Wildfire

<i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>	Significant or Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less than Significant	No Impact
a) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Project site is within the State Responsibility Area (SRA) (CAL FIRE, 2023). The California Department of Forestry and Fire Protection (CAL FIRE) is the agency responsible for fire protection services in the SRA. As described in Section II.F, Project Description, Marin County Fire Department (MCFD), through a contract with CAL FIRE, is responsible for protecting nearly 200,000 acres of State Responsibility Area (SRA), which includes the San Geronimo Valley and most of West Marin.

Most of the Project site is mapped as Wildland-Urban Interface (WUI) (MarinMap, 2023). The entirety of the Project site is mapped as “moderate” Fire Hazard Severity Zone (MarinMap, 2023).

- a) Would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

Most of the Project site consists of flat land and gentle slopes, which are not conducive to the rapid spread of wildfire. The Project site is currently managed for fire hazard risk reduction through a vegetation management program that includes mowing of former fairway areas in the spring and early summer. Though these areas are no longer

irrigated, as they were when the Project site was a golf course, mowing reduces the potential both for ignition and for uncontrolled spread of wildfire.

The proposed new fire station and remodeled clubhouse facilities would be designed and constructed to meet Marin County Building Code requirements for fire safety. Since the new fire station would be partly or wholly located in a mapped WUI area, development would be subject to the requirements and restrictions of the WUI ordinance (California Building Code Section 7a, Materials and Construction Methods for Exterior Wildfire Exposure), which requires fire-resistant building materials and methods. The Project is also subject to the requirements of the Marin County Fire Code, which requires developments within the WUI to prepare and implement a Vegetation Management Plan (VMP) consistent with Marin County Fire Standard 220. The VMP must include a fire hazard risk assessment, plan for creation and maintenance of defensible space, and specify the species and spacing of landscape plants. Standard 220 includes a list of prohibited, highly flammable plants that includes many common invasive species.

The remainder of the Project site would be managed by Marin County Parks. Vegetation management to reduce fire hazard can be expected to continue under County Parks management.

Based on the discussion above, the Project would not exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The impact would be less than significant.

b) Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Project site is already served with adequate emergency water supply. Existing roads, former golf cart trails, and managed vegetation on the former fairways serve as fuelbreaks. No new power lines or utilities would be necessary for Project development. No development or maintenance of infrastructure is necessary that may exacerbate fire risk or result in temporary or ongoing significant impacts to the environment. The impact is therefore less than significant.

c) Would the Project Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The Project site, as stated above, is mostly flat or gently sloped. This includes the area of the site proposed for development of the new fire station. As discussed in Section IV.7, Geology and Soils, the Project site is not highly susceptible to landslides or other slope failure. The Project also includes development of a stormwater management system to serve the new impervious surfaces introduced by the fire station facilities, as described in Section II.F, Project Description, and analyzed in Section IV.10, Hydrology and Water Quality. As a result of these considerations, the Project would not be

expected to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. There would be no impact of this kind.

d) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

For all the reasons stated in the foregoing discussions, and in addition because the Project would include construction of a new, state-of-the-art fire station, staffed 24 hours per day, on the Project site, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Any such impact would be less than significant.

References

California Department of Forestry and Fire Protection (CAL FIRE), 2023. State Responsibility Area (SRA) Viewer. <https://bof.fire.ca.gov/projects-and-programs/state-responsibility-area-viewer/> Accessed October 18, 2023.

MarinMap, 2023. Wildland Urban Interface and Fire Hazard Severity Zones layers. <https://www.marinmap.org/dnn/> Accessed October 18, 2023.

21. MANDATORY FINDINGS OF SIGNIFICANCE.
Pursuant to Section 15065 of the State EIR Guidelines, a project shall be found to have a significant effect on the environment if any of the following are true:

	Yes	No	Maybe
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Section IV.4, Biological Resources, finds that the Project could have an adverse impact on sensitive habitats and wildlife species. With adherence to regulatory requirements and the mitigation measures identified in that section, however, all impacts on biological resources would be reduced to less than significant, and the Project would not

substantially degrade the quality of the environment or substantially impact sensitive plants or animals. Section IV.5, Cultural Resources, finds that the portion of the Project site where new development would occur has no known archaeological or historical resources present. Given the potential for the presence of previously unrecorded archaeological resources to be buried beneath the Project site, and the potential for their accidental discovery and disturbance during Project construction, mitigation measures are identified in Section IV.5 to require construction worker training in cultural resources sensitivity and awareness, and for actions to be taken in the event that potential cultural resources are inadvertently discovered during construction. With these measures, the potential to impact previously unrecorded historical or archaeological resources would be reduced to less than significant. With mitigation, the Project would not have the potential to cause a substantial adverse change in the significance of an archaeological or historical resource, and therefore would not have the potential to eliminate important examples of the major periods of California history or prehistory.

b) Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Past, current, and probable future projects in the vicinity of the Project site that could combine with the Project to cause a cumulative impact include two other projects within the Project site: the Roy’s Pools Fish Passage and Floodplain Restoration project, and the San Anselmo Flood Risk Reduction (SAFRR) Mitigation Planting project, both of which are located along San Geronimo Creek. The Roy’s Pools project, which was completed in 2020 and 2021, removed a high priority fish barrier, creating and restoring approximately five acres of creek habitat with the construction of 0.25-mile-long floodplain corridors (Turtle Island Network, 2023). The SAFRR Mitigation Planting project will convert former fairway areas south of San Geronimo Creek to riparian habitat and a small area of upland oak grassland. The project involves planting approximately 1,700 native plants and trees over two distinct sites totaling 0.44 acres (Marin County Flood Control and Water Conservation District, 2023).

A nearby project is the Roy’s Redwoods Restoration project. The project is being undertaken by the Marin County Open Space District to provide a sustainable trail system that reduces the impacts of visitor use on environmentally sensitive areas while improving visitor experience within the old-growth redwood forest in Roy’s Redwoods Preserve, located just north of the Project site. Erosion, soil compaction, and unsustainable trail density created by the network of social trails are of concern for the health of the old-growth redwood forest along the valley floor of Upper Larsen Creek. The project will decommission social trails, relocate segments of existing trails to remove them from sensitive areas, and upgrade retained trails to improve drainage and reduce erosion and sedimentation. The project is also intended to improve hydrologic conditions and increase groundwater infiltration and storage throughout the valley floor through implementation of habitat restoration activities designed to create a wetland-channel

complex along Upper Larsen Creek through the redwood forest in conjunction with the proposed trail closures and trail improvements (Marin County OSD, 2023).

In addition, the Marin County Community Development Agency lists one current planning project in the San Geronimo area: the Ezekiel Site Plan Review project (P4119) is located in Forest Knolls, about 1.3 miles west of the Project site (Marin CDA, 2023). That project, which is undergoing Site Plan Review, would grade and increase lot coverage by 247 square feet in a Stream Conservation Area (SCA) on a lot in Forest Knolls with a commercial unit located on it.

All of these cumulative projects involve work in or along San Geronimo Creek and its tributary, Larsen Creek. As discussed in Section IV.4, Biological Resources, San Geronimo Creek is tributary to Lagunitas Creek, which supports endangered coho salmon and threatened steelhead trout. The creek has suffered decades of habitat loss and water quality degradation and is listed as an impaired water body under the federal Clean Water Act (see Section IV.10, Hydrology and Water Quality). Impacts to these special status species and to the stream itself are cumulative in nature. Here, the question is whether the Project, combined with other nearby projects, has the potential to make a substantial contribution to that ongoing cumulative impact that may be cumulatively considerable.

The Roy's Pools Fish Passage and Floodplain Restoration project, the SAFRR Mitigation Planting project, and the Roy's Redwoods Restoration Project are all intended specifically to improve habitat conditions in and along San Geronimo Creek and its tributary, Larsen Creek. While these projects may result in short-term disturbance of aquatic and terrestrial habitat, including removal of riparian vegetation, physical alteration of the stream channel, and increased short-term sedimentation, they will result in long-term habitat improvements. With mitigation measures and BMPs applied to SAFRR (Marin County Flood Control and Water Conservation District, 2023) and to the Roy's Pools project through conditions required by the CDFW Streambed Alteration Agreement and a Marin County tree removal permit (Marin County Department of Public Works, 2020), these projects would minimize sedimentation and other short-term impacts of the restoration and reduce their impacts to a less-than-significant level. The Roy's Redwoods Restoration project will incorporate applicable Policies and BMPs from MCOSD's Road and Trail Management Plan, which are designed to minimize or avoid potential impacts to hydrology and water quality (Marin County OSD, 2023). These measures will minimize the capacity of impacts from these projects to combine with impacts from the current Project on San Geronimo Creek.

The Ezekiel Site Plan Review project is being reviewed by the County pursuant to the recently-adopted Development Code amendments that implement the Expanded Stream Conservation Area (SCA) Ordinance for the San Geronimo Valley (Development Code Section 22.30.045 - San Geronimo Community Standards), in compliance with 2007 Marin Countywide Plan (CWP) Policy BIO-4.1, which defines SCAs and establishes development buffer zones for ephemeral, intermittent, and perennial streams specifically for the protection of water quality and salmonid habitat. The Development Code amendments apply within the San Geronimo Valley and specify development

requirements and limitations on allowable uses and site assessment requirements for developments within SCAs. The Development Code amendments also specify requirements for development within San Geronimo Valley for the protection of streams where development is outside of SCAs. With adherence to the Development Code amendments, which themselves may be considered a “cumulative project” for the purpose of this analysis, the Ezekial Site Plan Review project would not be expected to result in substantial sedimentation or hydromodification of the creek.

There are no other recent past, current, or foreseeable future projects within or close to the Project site that could combine with the Project’s biological resources or hydrology and water quality impacts in a cumulative manner. Future projects in the San Geronimo Valley will be subject to the Development Code amendments, which will reduce their individual and cumulative impacts on San Geronimo Creek’s hydrology, water quality, and fishery.

As discussed in Section IV.10, Hydrology and Water Quality, Project activities would result in short-term increases in sediment entering stream channels during construction, but compliance with Project SWPPP regulatory requirements would reduce these impacts to less than significant. Development of a new stormwater management system to serve the proposed new fire station would ensure that stormwater runoff is treated to reduce sediment and peak flow; stormwater runoff would not have an adverse impact on San Geronimo Creek’s hydrology or water quality.

While it is not currently planned, a reasonably foreseeable consequence of the County’s purchase of the Project site may be demolition or other construction activities of or around one or more of the existing buildings along the north bank of San Geronimo Creek: the caretaker’s cottage, restroom, maintenance building, and equipment storage barn. There is, in addition, an un-used septic system associated with the caretaker’s cottage and restroom. Demolition or alteration could result in minor short-term sediment delivery to the creek, but stormwater management and erosion control BMPs required for construction and demolition projects would be applied to these possible future actions and would minimize their potential to cause impaired water quality in San Geronimo Creek.

Sedimentation and other impacts on San Geronimo Creek from all these projects can be expected to be of short duration. Furthermore, it is likely that these projects would not occur simultaneously, but over several years. Impacts would be minimized by applicable mitigation measures and BMPs. Therefore, the less-than-significant effects of the Project would not tend to combine with the less-than-significant effects of the other projects to cause a cumulatively considerable impact on aquatic habitat. Where cumulative impacts may occur, the Project’s contribution would not be cumulatively considerable. Thus, the cumulative effect would be less than significant.

Other impacts of the Project, including impacts to biological resources within the Clubhouse Parcel, would tend to be either site specific or incapable of combining with impacts of other projects. Air emissions, including criteria pollutants and greenhouse gases, would fall below the significance threshold, indicating that they would not make a

cumulatively considerable contribution to regional and global air quality and climate change impacts. In sum, the Project does not have the potential to cause impacts that are individually limited, but cumulatively considerable.

c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed in Section IV.3, Air Quality, the Project could have a significant adverse effect on human health, but Mitigation Measure AQ-2 (Diesel Exhaust Emissions Reduction Measures) would reduce this impact to less than significant. With this measure, the Project would not have a substantial adverse effect on human beings. Other potential direct or indirect impacts on human beings, such as from geologic hazards (Section IV.7, Geology and Soils), exposure to hazardous materials (Section IV.9, Hazards and Hazardous Materials), and construction noise (Section IV.13, Noise), would be less than significant, and would not have substantial adverse effects on human beings.

d) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?

As described in Section II.F, Project Description, the Project would replace an existing, antiquated and obsolete fire station with a new, state-of-the-art station, with concomitant improvements to emergency response capabilities, as well as an increased capacity to respond to the rapidly increasing wildfire threat posed by climate change. The Project would also repurpose an existing structure as the new Marin County Fire Department (MCFD) headquarters, remodeling the old clubhouse building to meet Essential Service Buildings standards to ensure that emergency operations can function following an earthquake or other disaster. The remainder of the Project site would remain as public open space, providing an important recreational amenity to the San Geronimo community and facilitating the future restoration of San Geronimo Creek and its important salmonid fisheries. As detailed in this Initial Study, this would all be accomplished without significant environmental effects. While Project construction would have short-term environmental impacts that require mitigation, long-term operation of the Project would not result in any significant environmental impacts. The Project would have considerable long-term benefits for the community and the environment. Therefore, the Project would not achieve short-term environmental benefits to the disadvantage of local, State, or global long-term environmental goals.

References

Marin County Community Development Agency, 2023. Ezekiel Site Plan Review P4119). https://www.marincounty.org/depts/cd/divisions/planning/projects/san-geronimo/ezekiel_spr_p4119_fk Accessed Oct. 18, 2023.

Marin County Flood Control and Water Conservation District, 2023. San Anselmo Flood Risk Reduction Project Mitigation Planting: Addendum to the 2018 San Anselmo Flood Risk Reduction Project Final Environmental Impact Report (SCH # 2017042041). May 2023.

Marin County Open Space District, 2023. Initial Study/Mitigated Negative Declaration for the Proposed Roy's Redwoods Restoration Project at Roy's Redwoods Open Space Preserve. February 2023.

Marin County Public Works Department, 2020. Notice of Determination, 2017 Fisheries Habitat Restoration Project Subsequent Creek Permit, Design Review, and Tree Removal Permit. April 23, 2020.

Turtle Island Restoration Network, 2023. Roy's Pools Fish Passage and Floodplain restoration Project. <https://seaturtles.org/campaigns/roys-pools-fish-passage-and-floodplain-restoration-project/> Accessed Oct. 18, 2023.

V. DETERMINATION: (Completed by Marin County Environmental Planning Manager). Pursuant to Sections 15081 and 15070 of the State Guidelines, the forgoing Initial Study evaluation, and the entire administrative record for the project:

- I find that the proposed project WILL NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



Rachel Reid, Environmental Planning Manager

12/4/2023

Date

Appendices

A. Mitigation Monitoring and Reporting Program

B. Air Quality Technical Report

C. Architectural Program

APPENDIX A

Mitigation Monitoring and Reporting Program

The purpose of this Mitigation Monitoring and Reporting Program (MMRP) is to ensure that mitigation measures necessary to reduce the Project's significant impacts to less than significant are implemented in a timely and effective manner. In addition to the text of each mitigation measure, the MMRP table includes a description of the associated monitoring measure, when the measure will be implemented, and by whom it will be monitored.

San Geronimo Fire Station
MITIGATION MONITORING AND REPORTING PROGRAM
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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
Aesthetics				
<p>Project could create a new source of substantial glare which would adversely affect daytime views in the area</p>	<p>Mitigation Measure AESTHETICS-1: Design to Reduce Glare</p> <p>Prior to approval of architectural plans for the new fire station facilities, the County will direct the Project architect to evaluate the proposed design to determine whether buildings and surfaces could cause a substantial new source of daytime glare. The architect will review the plans and make adjustments as necessary to reduce the potential for creation of a substantial new source of glare that could adversely affect daytime views. Design features to reduce glare may include, but are not limited to, the following: use of low-reflectivity glass coatings, roofing, and surface finishes; use of roof eaves and articulated facades; landscape vegetation, including trees, to increase shading and break-up lines of site to flat surfaces; avoiding use of large areas of glass and other reflective surfaces. Planting of shade trees will comply with the requirements of California Title 24 (CALGreen) Section 5.106.12, Shade Trees, for surface parking areas, landscape areas, and hardscape areas, except where shade tree planting would interfere with emergency response operations. Recommendations will be incorporated into the final design of the fire station facilities.</p>	<p>Mitigation Monitoring Measure AESTHETICS-1:</p> <p>The Marin County Fire Department (MCFD) will task the Project architect with designing the Project to avoid glare impacts. MCFD will be responsible for incorporating recommendations into the final design of the new facilities.</p>	<p>During design of fire station</p>	<p>Marin County Fire Department</p>

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
Air Quality				
<p>Project would result in an increase in dust emissions.</p>	<p>Mitigation Measure AQ-1: BAAQMD’s Basic BMPs for Construction. During Project construction, BAAQMD’s basic BMPs for construction-related fugitive dust shall be implemented, which include:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • All trucks and equipment, including their tires, shall be washed off prior to leaving the site. • Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted wood chips, mulch, or gravel. • A publicly visible sign shall be posted with the telephone number and person to contact at the County regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations. 	<p>Mitigation Monitoring Measure AQ-1: Marin County’s construction Project Manager will verify that the provisions of the measure have been implemented.</p>	<p>During construction</p>	<p>Marin County Project Manager</p>

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
Project construction would result in short-term increases in diesel particulate emissions	Mitigation Measure AQ-2: Diesel Exhaust Emissions Reduction. During Project construction, all off-road diesel-powered equipment with engines greater than 25 horsepower shall meet Tier 4 Final Emissions Standards.	Mitigation Monitoring Measure AQ-2: Marin County's construction Project Manager shall verify that the provisions of the measure have been implemented.	During construction	Marin County Project Manager
Biological Resources				
Project could impact nesting birds	Mitigation Measure BIO-1 Nesting Bird Protection Within two weeks prior to any tree trimming or vegetation removal in nesting season (February 1 to August 31), a qualified biologist will conduct a nesting bird survey within each area where work will take place and all areas within 250 feet. Nesting birds with active nests in the vicinity of the construction area will be avoided by a minimum buffer of 100 feet, or as determined by the qualified biologist in communication with the California Department of Fish and Wildlife. Construction work may continue outside of the no-work buffer.	Mitigation Monitoring Measure BIO-1: Prior to the start of construction, the County will employ the services of a biological monitor to carry out the survey and monitoring provisions of Mitigation Measure BIO 1. The Biological Monitor will report to the County's Project Manager monitoring activities and any encounter with sensitive species. The County will report all observations of sensitive species made during construction to the California Natural Diversity Database (CNDDDB).	During construction	Marin County Project Manager

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
Project could impact roosting bats.	<p>Mitigation Measure BIO-2 Bat Roost Protection</p> <p>Before any ground-disturbing activity or building demolition, a qualified bat biologist will conduct surveys of all potential bat habitat, including areas suitable for maternity roosts and/or winter hibernacula prior to initiation of construction activities. Surveys will be conducted within 3 months prior to the commencement of construction or demolition activities. Removal or trimming of trees or demolition of buildings showing evidence of bat hibernation or maternity activity will occur during the period least likely to affect inactive wintering bats and active bat maternity roosts (i.e., avoid roost disturbance from October 15 to February 15 for winter hibernacula, and April 15 to August 15 for maternity roosts). Tree removal or demolition may occur during sensitive bat roosting periods if a qualified bat biologist confirms the absence of overwintering habitat or maternity roosts. If active day or night (non-maternity) roosts are found, the bat biologist will supervise tree removal or building demolition over two days in order to allow individual bats to depart prior to tree removal or building demolition.</p>	<p>Mitigation Monitoring Measure BIO-2:</p> <p>Prior to start of construction, the County will employ the services of a biological monitor to carry out the survey and monitoring provisions of Mitigation Measure BIO 2. The Biological Monitor will report to the County's Project Manager monitoring activities and any encounter with sensitive species. The County will report all observations of sensitive species made during construction to the California Natural Diversity Database (CNDDDB).</p>	During construction	Marin County Project Manager

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
Project would impact sensitive natural communities	<p>Mitigation Measure BIO-3 Sensitive Natural Communities</p> <p>The area of impact to riparian vegetation will be minimized by siting construction staging and access areas outside sensitive natural communities and by utilizing previously disturbed upland areas for staging. Certified weed-free permanent and temporary erosion control measures (e.g., fabric wattles) will be used to minimize erosion and sedimentation during and after construction. Temporary impacts on sensitive natural communities will be restored by revegetation with native species. Revegetated sensitive natural areas will be monitored for a five-year period to ensure success, according to the Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-4.</p> <p>Any permanently impacted riparian area will be mitigated in accordance with specifications of applicable regulatory agency permits; including compensatory mitigation, if required, with replacement of like habitat on- or off-site, at a 1:1 ratio, or as otherwise specified by applicable resource agency permit(s).</p>	<p>Mitigation Monitoring Measure BIO-3:</p> <p>The County will include the provisions of Mitigation Measure BIO-3 in all construction contracts. The County's Project Manager will be responsible for verifying compliance with these conditions.</p> <p>Revegetated sensitive natural areas will be monitored for a five-year period to ensure success, according to the monitoring requirements described in Mitigation Measure BIO-4.</p>	During construction and during five-year monitoring period	Marin County Project Manager

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
	<p>Mitigation Measure BIO-4 Habitat Restoration and Monitoring</p> <p>Following project construction, the County will restore sensitive vegetation disturbed during construction, and monitor conditions to ensure that restoration has been successful. Restoration and monitoring will be guided by a qualified biologist experienced in wetland habitat restoration. Restoration will include protocols for replanting of native vegetation removed prior to or during construction, and management and monitoring of the plants to ensure replanting success. The following measures will apply to site restoration:</p> <ul style="list-style-type: none"> • Areas impacted from construction-related activity will be replanted or reseeded with locally collected and grown native shrubs and herbaceous species suitable for riparian locations, under guidance from a qualified restoration biologist. • Monitoring will commence following the completion of restoration activities and will continue annually for five years or until performance criteria are satisfied. Success criteria for monitoring will include: <ul style="list-style-type: none"> • 70 percent survival of planted vegetation; or • native herbaceous species in restored areas exceeding 60 percent relative vegetative cover; and, • less than 20 percent cover of invasive non-native plants identified on the California Invasive Plant Council (Cal-IPC) High or Moderate lists. 	<p>Mitigation Monitoring Measure BIO-4:</p> <p>The County will contract with a landscaping or restoration firm to complete revegetation and restoration requirements. Revegetation of disturbed areas will occur during the same year in which the disturbance occurred. The County's Project Manager will be responsible for oversight of the contractor and for the post-revegetation monitoring of restored areas.</p>	<p>Revegetation will occur during the same year in which the disturbance occurred. Monitoring will continue for five years, or until performance criteria are satisfied.</p>	<p>Marin County Project Manager</p>
<p>Project would remove protected trees</p>	<p>Mitigation Measure BIO-5 Tree Removal</p> <p>Prior to the start of construction, the County will determine whether any heritage or protected trees are to be removed, using the definitions of heritage and protected trees in County Code Section 22.62. The County will replace any such trees at a 3:1 ratio, with plantings of native trees within the Project site.</p>	<p>Mitigation Monitoring Measure BIO-5:</p> <p>The County will conduct the required tree assessment prior to construction. The County's Project Manager will be responsible for ensuring that replacement planting requirements are implemented.</p>	<p>Prior to construction</p>	<p>Marin County Project Manager</p>

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
Cultural Resources				
Project could impact historical resources	<p>Mitigation Measure CUL-1</p> <p>a. Historic Resources Evaluation. Prior to the County undertaking any demolition, destruction, relocation, or alteration of the maintenance building, equipment storage barn, or caretaker's cottage, the County shall conduct an historic resources evaluation to; 1) determine whether any of the structures would qualify as an historic resource eligible for listing on the California Register of Historic Resources, and 2) whether the proposed action would materially impair the significance of any identified historic resources. The evaluation will be conducted by a qualified architectural historian who meets the Secretary of the Interior's Standards for architectural history.</p> <p>b. If the historic resources evaluation specified above finds that the proposed action would not materially impair the significance of any identified historic resource, the action may proceed. If the action would materially impair the significance of any identified historic resource, the action will not proceed, until it is revised to be consistent with the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings, as determined by a qualified architectural historian.</p>	<p>Mitigation Monitoring Measure CUL-1:</p> <p>The Director of Marin County Parks will be responsible for ensuring that the mitigation measure is implemented prior to any demolition, destruction, relocation, or alteration of any of the three buildings in Parcel 172-372-14.</p>	Prior to alteration or demolition of any buildings on southern parcel	Marin County Parks

San Geronimo Fire Station
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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
Project could impact archaeological resources	<p>Mitigation Measure CUL-2: Cultural Resources Sensitivity Training</p> <p>A cultural resource sensitivity training led by a Secretary of the Interior-qualified archaeologist shall be conducted for all construction personnel prior to any ground-disturbing activities. A representative from a local Tribal organization shall be invited to participate in this training. The training program will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located in the Project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The training program will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans.</p>	<p>Mitigation Monitoring Measure CUL-2:</p> <p>The County's Project Manager for construction of the new fire station and related facilities will be responsible for ensuring the implementation of Mitigation Measure CUL-2, and will submit a copy of the outline of the training to the Marin County Community Development Agency prior to the scheduled training session.</p>	Prior to ground-disturbing activities (during construction)	Marin County Project Manager
	<p>Mitigation Measure CUL-3: Inadvertent Discovery of Cultural Resources</p> <p>If pre-contact or historic-era archaeological resources are encountered during Project implementation, all construction activities within 100 feet shall halt, and a Secretary of the Interior-qualified archaeologist shall inspect the find within 24 hours of discovery and notify the County of their initial assessment. If the find is deemed pre-contact, a Native American Heritage Commission (NAHC)-listed Tribe will be invited to evaluate the find. Pre-contact archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones.</p>	<p>Mitigation Monitoring Measure CUL-3: The County's Project Manager for construction of the new fire station and related facilities will be responsible for ensuring the implementation of Mitigation Measure CUL-3, and will report any accidental discovery of potential cultural resources to the Marin County Community Development Agency immediately.</p>	During construction	Marin County Project Manager

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by
	<p>Historic-era materials might include building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse.</p> <p>If the County determines, based on recommendations from a Secretary of the Interior-qualified archaeologist and a NAHC-listed Tribe (if the resource is Native American related), that the resource may qualify as a historical resource or unique archaeological resource (defined in State CEQA Guidelines Section 15064.5) or a tribal cultural resource (defined in PRC Section 21080.3), the resource shall be avoided, if feasible. This may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.</p> <p>If avoidance is not feasible, the County shall work with a Secretary of the Interior-qualified archaeologist and a NAHC-listed Tribe (if the resource is Native American-related) to determine treatment measures to avoid, minimize, or mitigate any potential impacts or adverse effects to the resource. This shall include documentation of the resource and may include data recovery, if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource.</p>			
Project could disturb human remains	<p>Mitigation Measure CUL-4: Training for Accidental Discovery of Human Remains.</p> <p>The archaeological training specified in Mitigation Measure CUL-2 shall include training on identification of human remains or potential human remains, and on the procedures to follow in the event of such discovery.</p>	<p>Mitigation Monitoring Measure CUL-4: See Mitigation Monitoring Measure CUL-2.</p>	Prior to ground-disturbing activities (during construction)	Marin County Project Manager

Appendix B

CalEEMod Air Quality and GHG Emissions Output
(82 pages)

San Geronimo Valley Fire Station Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	San Geronimo Valley Fire Station
Construction Start Date	6/2/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	49.8
Location	5800 Sir Francis Drake Blvd, San Geronimo, CA 94963, USA
County	Marin
City	Unincorporated
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	906
EDFZ	2
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.18

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
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Government Office Building	44.4	1000sqft	0.96	44,400	25,000	—	—	—
Parking Lot	20.0	1000sqft	0.46	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	100	1000sqft	2.30	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.00	3.37	31.7	30.9	0.06	1.37	19.8	21.2	1.26	10.1	11.4	—	7,539	7,539	0.70	0.73	9.91	7,786
Mit.	1.04	0.56	8.58	29.0	0.06	0.13	19.8	19.9	0.11	10.1	10.2	—	7,539	7,539	0.70	0.73	9.91	7,786
% Reduced	74%	83%	73%	6%	—	90%	—	6%	91%	—	10%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.42	33.2	10.8	13.7	0.02	0.43	0.17	0.60	0.40	0.04	0.44	—	2,717	2,717	0.12	0.05	0.03	2,735
Mit.	0.43	33.1	3.18	15.5	0.02	0.08	0.17	0.25	0.08	0.04	0.12	—	2,717	2,717	0.12	0.05	0.03	2,735
% Reduced	70%	< 0.5%	71%	-13%	—	82%	—	59%	81%	—	73%	—	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.93	1.04	7.17	9.38	0.02	0.29	2.40	2.69	0.27	1.19	1.45	—	1,856	1,856	0.09	0.06	0.38	1,869
Mit.	0.29	0.97	2.17	10.6	0.02	0.05	2.40	2.44	0.05	1.19	1.22	—	1,856	1,856	0.09	0.06	0.38	1,869
% Reduced	69%	6%	70%	-13%	—	82%	—	9%	81%	—	16%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.19	1.31	1.71	< 0.005	0.05	0.44	0.49	0.05	0.22	0.27	—	307	307	0.02	0.01	0.06	309
Mit.	0.05	0.18	0.40	1.94	< 0.005	0.01	0.44	0.44	0.01	0.22	0.22	—	307	307	0.02	0.01	0.06	309
% Reduced	69%	6%	70%	-13%	—	82%	—	9%	81%	—	16%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.00	3.37	31.7	30.9	0.06	1.37	19.8	21.2	1.26	10.1	11.4	—	7,539	7,539	0.70	0.73	9.91	7,786
2026	1.36	1.13	10.2	13.6	0.02	0.38	0.17	0.55	0.35	0.04	0.39	—	2,718	2,718	0.12	0.05	0.93	2,738
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.42	1.18	10.8	13.7	0.02	0.43	0.17	0.60	0.40	0.04	0.44	—	2,717	2,717	0.12	0.05	0.03	2,735
2026	1.35	33.2	10.2	13.6	0.02	0.38	0.17	0.55	0.35	0.04	0.39	—	2,710	2,710	0.12	0.05	0.02	2,729
2027	0.15	33.2	0.84	1.21	< 0.005	0.02	0.02	0.04	0.02	0.01	0.02	—	156	156	0.01	< 0.005	< 0.005	156
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.92	0.74	7.17	7.81	0.01	0.29	2.40	2.69	0.27	1.19	1.45	—	1,657	1,657	0.09	0.06	0.38	1,677

2026	0.93	1.04	6.99	9.38	0.02	0.26	0.12	0.38	0.24	0.03	0.27	—	1,856	1,856	0.08	0.04	0.28	1,869
2027	< 0.005	0.98	0.02	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.57	4.57	< 0.005	< 0.005	< 0.005	4.59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.17	0.14	1.31	1.43	< 0.005	0.05	0.44	0.49	0.05	0.22	0.27	—	274	274	0.02	0.01	0.06	278
2026	0.17	0.19	1.28	1.71	< 0.005	0.05	0.02	0.07	0.04	0.01	0.05	—	307	307	0.01	0.01	0.05	309
2027	< 0.005	0.18	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.76

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.04	0.56	8.58	29.0	0.06	0.13	19.8	19.9	0.11	10.1	10.2	—	7,539	7,539	0.70	0.73	9.91	7,786
2026	0.43	0.39	3.13	15.5	0.02	0.08	0.17	0.25	0.08	0.04	0.12	—	2,718	2,718	0.12	0.05	0.93	2,738
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.43	0.39	3.18	15.5	0.02	0.08	0.17	0.25	0.08	0.04	0.12	—	2,717	2,717	0.12	0.05	0.03	2,735
2026	0.42	33.1	3.15	15.5	0.02	0.08	0.17	0.25	0.08	0.04	0.12	—	2,710	2,710	0.12	0.05	0.02	2,729
2027	0.03	33.1	0.65	1.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	156	156	0.01	< 0.005	< 0.005	156
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.22	0.18	1.58	8.10	0.01	0.04	2.40	2.44	0.04	1.19	1.22	—	1,657	1,657	0.09	0.06	0.38	1,677
2026	0.29	0.52	2.17	10.6	0.02	0.05	0.12	0.17	0.05	0.03	0.08	—	1,856	1,856	0.08	0.04	0.28	1,869
2027	< 0.005	0.97	0.02	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.57	4.57	< 0.005	< 0.005	< 0.005	4.59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.03	0.29	1.48	< 0.005	0.01	0.44	0.44	0.01	0.22	0.22	—	274	274	0.02	0.01	0.06	278
2026	0.05	0.10	0.40	1.94	< 0.005	0.01	0.02	0.03	0.01	0.01	0.01	—	307	307	0.01	0.01	0.05	309

2027	< 0.005	0.18	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.76
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2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.37	1.43	0.29	2.16	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	905	944	4.08	0.05	0.11	1,062
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	1.11	0.28	0.23	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	897	936	4.08	0.05	0.11	1,054
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	1.27	0.29	1.19	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	901	940	4.08	0.05	0.11	1,058
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.23	0.05	0.22	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	6.48	149	156	0.68	0.01	0.02	175

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.34	1.41	0.02	1.93	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.94	7.94	< 0.005	< 0.005	—	7.97
Energy	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	864	864	0.12	0.01	—	871

San Geronimo Valley Fire Station Detailed Report, 8/25/2023

Water	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.37	1.43	0.29	2.16	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	905	944	4.08	0.05	0.11	1,062
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	1.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	864	864	0.12	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.03	1.11	0.28	0.23	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	897	936	4.08	0.05	0.11	1,054
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.17	1.25	0.01	0.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.92	3.92	< 0.005	< 0.005	—	3.93
Energy	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	864	864	0.12	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.20	1.27	0.29	1.19	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	901	940	4.08	0.05	0.11	1,058
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.03	0.23	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Energy	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	143	143	0.02	< 0.005	—	144
Water	—	—	—	—	—	—	—	—	—	—	—	2.80	5.38	8.18	0.29	0.01	—	17.4
Waste	—	—	—	—	—	—	—	—	—	—	—	3.68	0.00	3.68	0.37	0.00	—	12.9

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.04	0.23	0.05	0.22	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	6.48	149	156	0.68	0.01	0.02	175

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.34	1.41	0.02	1.93	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.94	7.94	< 0.005	< 0.005	—	7.97
Energy	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	864	864	0.12	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.37	1.43	0.29	2.16	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	905	944	4.08	0.05	0.11	1,062
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	1.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	864	864	0.12	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.03	1.11	0.28	0.23	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	897	936	4.08	0.05	0.11	1,054
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Area	0.17	1.25	0.01	0.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.92	3.92	< 0.005	< 0.005	—	3.93
Energy	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	864	864	0.12	0.01	—	871
Water	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	0.20	1.27	0.29	1.19	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	39.2	901	940	4.08	0.05	0.11	1,058
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.03	0.23	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Energy	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	143	143	0.02	< 0.005	—	144
Water	—	—	—	—	—	—	—	—	—	—	—	2.80	5.38	8.18	0.29	0.01	—	17.4
Waste	—	—	—	—	—	—	—	—	—	—	—	3.68	0.00	3.68	0.37	0.00	—	12.9
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.04	0.23	0.05	0.22	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	6.48	149	156	0.68	0.01	0.02	175

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314

Dust From Material Movement:	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	3.03	2.89	< 0.005	0.13	—	0.13	0.12	—	0.12	—	508	508	0.02	< 0.005	—	510
Dust From Material Movement:	—	—	—	—	—	—	1.88	1.88	—	0.97	0.97	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.55	0.53	< 0.005	0.02	—	0.02	0.02	—	0.02	—	84.1	84.1	< 0.005	< 0.005	—	84.4
Dust From Material Movement:	—	—	—	—	—	—	0.34	0.34	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.68	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	151	151	< 0.005	0.01	0.61	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.03	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.24	2.24	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.2. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.50	2.59	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.25	2.71	< 0.005	0.01	—	0.01	0.01	—	0.01	—	508	508	0.02	< 0.005	—	510
Dust From Material Movement:	—	—	—	—	—	—	1.88	1.88	—	0.97	0.97	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	84.1	84.1	< 0.005	< 0.005	—	84.4
Dust From Material Movement:	—	—	—	—	—	—	0.34	0.34	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.68	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	151	151	< 0.005	0.01	0.61	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.03	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.24	2.24	< 0.005	< 0.005	< 0.005	—	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970	
Dust From Material Movement	—	—	—	—	—	—	7.12	7.12	—	3.43	3.43	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.89	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163	
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9	
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.06	0.05	0.04	0.59	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	129	129	< 0.005	< 0.005	0.52	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.70	0.12	6.51	3.80	0.03	0.08	1.14	1.22	0.05	0.30	0.36	—	4,451	4,451	0.58	0.71	9.38	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.64	6.64	< 0.005	< 0.005	0.01	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.04	0.01	0.37	0.21	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	244	244	0.03	0.04	0.22	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.4	40.4	0.01	0.01	0.04	—	

3.4. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,959	2,959	0.12	0.02	—	2,970
Dust From Material Movement:	—	—	—	—	—	—	7.12	7.12	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.11	0.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement:	—	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.8	26.8	< 0.005	< 0.005	—	26.9

Dust From Material Movement:	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.59	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	129	129	< 0.005	< 0.005	0.52	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.70	0.12	6.51	3.80	0.03	0.08	1.14	1.22	0.05	0.30	0.36	—	4,451	4,451	0.58	0.71	9.38	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.64	6.64	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.04	0.01	0.37	0.21	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	244	244	0.03	0.04	0.22	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.10	1.10	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.4	40.4	0.01	0.01	0.04	—

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.78	3.47	0.01	0.11	—	0.11	0.11	—	0.11	—	638	638	0.03	0.01	—	640
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.05	0.51	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	106
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.55	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	123	123	< 0.005	< 0.005	0.50	—
Vendor	0.03	0.01	0.29	0.17	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	205	205	0.02	0.03	0.52	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.50	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	114	114	< 0.005	< 0.005	0.01	—
Vendor	0.03	0.01	0.31	0.17	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	205	205	0.02	0.03	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.5	30.5	< 0.005	< 0.005	0.06	—
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	54.5	54.5	< 0.005	0.01	0.06	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.05	5.05	< 0.005	< 0.005	0.01	—
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.03	9.03	< 0.005	< 0.005	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.82	14.8	0.02	0.08	—	0.08	0.07	—	0.07	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.35	0.33	2.82	14.8	0.02	0.08	—	0.08	0.07	—	0.07	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.09	0.75	3.95	0.01	0.02	—	0.02	0.02	—	0.02	—	638	638	0.03	0.01	—	640
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	106	106	< 0.005	< 0.005	—	106
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.55	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	123	123	< 0.005	< 0.005	0.50	—
Vendor	0.03	0.01	0.29	0.17	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	205	205	0.02	0.03	0.52	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.50	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	114	114	< 0.005	< 0.005	0.01	—
Vendor	0.03	0.01	0.31	0.17	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	205	205	0.02	0.03	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.5	30.5	< 0.005	< 0.005	0.06	—
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	54.5	54.5	< 0.005	0.01	0.06	—

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.05	5.05	< 0.005	< 0.005	0.01	—	—	
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.03	9.03	< 0.005	< 0.005	0.01	—	—	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.52	8.58	0.02	0.25	—	0.25	0.23	—	0.23	—	1,586	1,586	0.06	0.01	—	1,591	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.13	1.19	1.57	< 0.005	0.05	—	0.05	0.04	—	0.04	—	263	263	0.01	< 0.005	—	263
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.52	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	120	120	< 0.005	< 0.005	0.45	—
Vendor	0.03	0.01	0.28	0.16	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	201	201	0.02	0.03	0.48	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.46	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	112	112	< 0.005	< 0.005	0.01	—
Vendor	0.03	0.01	0.29	0.16	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	201	201	0.02	0.03	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	74.5	74.5	< 0.005	< 0.005	0.13	—
Vendor	0.02	< 0.005	0.19	0.11	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	133	133	0.01	0.02	0.14	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.3	12.3	< 0.005	< 0.005	0.02	—
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.0	22.0	< 0.005	< 0.005	0.02	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.82	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.82	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.22	1.87	9.81	0.02	0.05	—	0.05	0.05	—	0.05	—	1,586	1,586	0.06	0.01	—	1,591
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	1.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	263	263	0.01	< 0.005	—	263
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.52	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	120	120	< 0.005	< 0.005	0.45	—
Vendor	0.03	0.01	0.28	0.16	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	201	201	0.02	0.03	0.48	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.46	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	112	112	< 0.005	< 0.005	0.01	—
Vendor	0.03	0.01	0.29	0.16	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	201	201	0.02	0.03	0.01	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	74.5	74.5	< 0.005	< 0.005	0.13	—
Vendor	0.02	< 0.005	0.19	0.11	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	133	133	0.01	0.02	0.14	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.3	12.3	< 0.005	< 0.005	0.02	—
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.0	22.0	< 0.005	< 0.005	0.02	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.9. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.68	6.23	8.81	0.01	0.26	—	0.26	0.24	—	0.24	—	1,350	1,350	0.05	0.01	—	1,355
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.26	0.36	< 0.005	0.01	—	0.01	0.01	—	0.01	—	55.5	55.5	< 0.005	< 0.005	—	55.7	
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.19	9.19	< 0.005	< 0.005	—	9.22	
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.07	0.06	0.06	0.65	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	158	158	< 0.005	0.01	0.02	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.08	1.08	< 0.005	< 0.005	< 0.005	—	

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.10. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.21	2.14	9.35	0.01	0.05	—	0.05	0.05	—	0.05	—	1,350	1,350	0.05	0.01	—	1,355	
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	55.5	55.5	< 0.005	< 0.005	—	55.7	
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.19	9.19	< 0.005	< 0.005	—	9.22	
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.65	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	158	158	< 0.005	0.01	0.02	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.51	6.51	< 0.005	< 0.005	0.01	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.08	1.08	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.11. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	33.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.05	1.05	< 0.005	< 0.005	—	1.05
Architectural Coatings	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.17	0.17	< 0.005	< 0.005	—	0.17
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.4	22.4	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.12. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	33.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.05	1.05	< 0.005	< 0.005	—	1.05

Architect Coatings	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.17	0.17	< 0.005	< 0.005	—	0.17
Architect ural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.4	22.4	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	—
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	—	33.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.92	3.92	< 0.005	< 0.005	—	3.93
Architect ural Coatings	—	0.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Architect ural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.0	22.0	< 0.005	< 0.005	< 0.005	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—	

3.14. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	33.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.92	3.92	< 0.005	< 0.005	—	3.93
Architectural Coatings	—	0.97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.0	22.0	< 0.005	< 0.005	< 0.005	—

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	—	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	523	523	0.08	0.01	—	528	
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	9.79	9.79	< 0.005	< 0.005	—	9.89	
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	—	—	533	533	0.09	0.01	—	538	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	523	523	0.08	0.01	—	528	
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	9.79	9.79	< 0.005	< 0.005	—	9.89	
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	—	—	533	533	0.09	0.01	—	538	

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	86.6	86.6	0.01	< 0.005	—	87.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1.62	1.62	< 0.005	< 0.005	—	1.64
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	88.2	88.2	0.01	< 0.005	—	89.1

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	523	523	0.08	0.01	—	528
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	9.79	9.79	< 0.005	< 0.005	—	9.89
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	533	533	0.09	0.01	—	538
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	523	523	0.08	0.01	—	528
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	9.79	9.79	< 0.005	< 0.005	—	9.89
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	533	533	0.09	0.01	—	538
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	86.6	86.6	0.01	< 0.005	—	87.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1.62	1.62	< 0.005	< 0.005	—	1.64
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	88.2	88.2	0.01	< 0.005	—	89.1

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	54.9	54.9	< 0.005	< 0.005	—	55.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	54.9	54.9	< 0.005	< 0.005	—	55.1

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.02	0.28	0.23	< 0.005	0.02	—	0.02	0.02	—	0.02	—	332	332	0.03	< 0.005	—	333
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	54.9	54.9	< 0.005	< 0.005	—	55.1
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	54.9	54.9	< 0.005	< 0.005	—	55.1

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.34	0.32	0.02	1.93	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.94	7.94	< 0.005	< 0.005	—	7.97
Total	0.34	1.41	0.02	1.93	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.94	7.94	< 0.005	< 0.005	—	7.97
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Total	0.03	0.23	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.34	0.32	0.02	1.93	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.94	7.94	< 0.005	< 0.005	—	7.97
Total	0.34	1.41	0.02	1.93	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.94	7.94	< 0.005	< 0.005	—	7.97
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Total	0.03	0.23	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2.80	5.38	8.18	0.29	0.01	—	17.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.80	5.38	8.18	0.29	0.01	—	17.4

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.9	32.5	49.4	1.74	0.04	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2.80	5.38	8.18	0.29	0.01	—	17.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2.80	5.38	8.18	0.29	0.01	—	17.4
-------	---	---	---	---	---	---	---	---	---	---	---	------	------	------	------	------	---	------

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.68	0.00	3.68	0.37	0.00	—	12.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.68	0.00	3.68	0.37	0.00	—	12.9

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.3	0.00	22.3	2.22	0.00	—	77.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.68	0.00	3.68	0.37	0.00	—	12.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.68	0.00	3.68	0.37	0.00	—	12.9

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
------------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
---------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	6/2/2025	7/18/2025	5.00	35.0	—
Grading	Grading	7/21/2025	8/15/2025	5.00	20.0	—
Building Construction	Building Construction	8/18/2025	12/4/2026	5.00	340	—
Paving	Paving	12/7/2026	12/25/2026	5.00	15.0	—
Architectural Coating	Architectural Coating	12/28/2026	1/15/2027	5.00	15.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38

Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.00	6.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	11.7	LDA,LDT1,LDT2

Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	60.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	14.2	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	7.28	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.84	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—

Grading	Worker	15.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	60.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	14.2	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	7.28	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.84	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
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Architectural Coating	0.00	0.00	66,600	22,200	7,200
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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	52.5	0.00	—
Grading	8,100	1,500	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	2.75

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Government Office Building	0.00	0%
Parking Lot	0.46	100%
Other Non-Asphalt Surfaces	2.30	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Government Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	66,600	22,200	7,200

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Government Office Building	935,769	204	0.0330	0.0040	1,035,041
Parking Lot	17,520	204	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Government Office Building	935,769	204	0.0330	0.0040	1,035,041
Parking Lot	17,520	204	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Government Office Building	8,820,490	205,822
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Government Office Building	8,820,490	205,822
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Government Office Building	41.3	—
Parking Lot	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Government Office Building	41.3	—
Parking Lot	0.00	—

Other Non-Asphalt Surfaces	0.00	—
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5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.91	annual days of extreme heat
Extreme Precipitation	18.9	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	21.6	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	5	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	5	1	1	4
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2
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The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	7.52
AQ-PM	11.4
AQ-DPM	3.65
Drinking Water	6.96
Lead Risk Housing	56.7
Pesticides	0.00
Toxic Releases	28.3
Traffic	8.72
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	33.2
Solid Waste	0.00

Sensitive Population	—
Asthma	0.46
Cardio-vascular	0.22
Low Birth Weights	32.3
Socioeconomic Factor Indicators	—
Education	21.4
Housing	42.3
Linguistic	0.00
Poverty	38.9
Unemployment	25.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	80.32849994
Employed	97.42076222
Median HI	73.41203644
Education	—
Bachelor's or higher	91.91582189
High school enrollment	100
Preschool enrollment	69.84473245
Transportation	—
Auto Access	75.69613756
Active commuting	77.91607853
Social	—
2-parent households	35.41639933

Voting	99.05042987
Neighborhood	—
Alcohol availability	71.39740793
Park access	57.28217631
Retail density	11.08687283
Supermarket access	2.399589375
Tree canopy	99.56371102
Housing	—
Homeownership	70.46066983
Housing habitability	62.67162838
Low-inc homeowner severe housing cost burden	21.96843321
Low-inc renter severe housing cost burden	39.02219941
Uncrowded housing	86.21840113
Health Outcomes	—
Insured adults	77.33863724
Arthritis	0.0
Asthma ER Admissions	90.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	84.8
Cognitively Disabled	23.2
Physically Disabled	47.8
Heart Attack ER Admissions	99.4

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	95.8
Elderly	7.7
English Speaking	98.1
Foreign-born	7.7
Outdoor Workers	44.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.9
Traffic Density	11.5
Traffic Access	23.0
Other Indices	—
Hardship	9.6
Other Decision Support	—
2016 Voting	99.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	1.00
Healthy Places Index Score for Project Location (b)	94.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Project Description 8/24/23
Construction: Construction Phases	Demolition removed; existing clubhouse will be repurposed.
Operations: Vehicle Data	Assuming no new vehicle trips during operations as the project should shorten VMT.
Construction: Dust From Material Movement	Conservative estimate assumed since earthwork is currently unknown. Expected to be far less or even balanced based on the proposed disturbance of the site.
Construction: Off-Road Equipment	—

Appendix C:
Architectural Program for Fire Station Facilities

COUNTY OF MARIN FIRE DEPARTMENT
DRAFT - NEW FIRE STATION

APPARATUS BAYS AND APPARATUS SUPPORT SPACES												
PROGRAM												
SPACES			EXISTING	ORIGINAL				UPDATED				NOTES
Code	Finish	Name	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
FS1	A	Apparatus Bays	4,810	20' X 70'	1,400	2	2,800	20' X 70'	1,400	5	7,000	5 double deep - drive through bays. Trench drains, electrical drops, and tailpipe exhaust at each bay. General exhaust system. Night lighting. Bay doors to be 14'x14'
		E-1586 (Type 1)		18' X 70'	1,260	3	3,780					
		E-1566 (Type 3)										
		E-1568 (Type 3)										
		ALS-96 Reserve Medic										
		Water Tender 1596 with ALSI										
		Utility 4x4, BC Vehicle Type 3 with Transporter for Dozer										
FS2	A	Vending / Ice Alcove	NA	3' X 10'	30	1	30	3' X 10'	30	1	30	See Warehouse Program
FS3	C	Medical Storage and Treatment	48	12' X 14'	168	1	168	12' X 14'	168	1	168	Adjacent to App Bays Built-in cabinetry for medical supply storage, backboard storage, charging counter, handwashing sink, space for gurney, near night lobby and apparatus bay
FS4	A	Central Maintenance Storage	500	10' X 10'	100	1	100	10' X 10'	100	1	100	Storage area for building and site maintenance equipment including lawn mowers, ladders, window washing tools, etc.
FS5	A	Turnout Gear Room	NA	24' X 18'	432	1	432	26' X 16'	416	1	416	12 fire personnel on duty per shift. 36 turnout lockers, continuous exhaust system, floor drain, heavy duty shelving, wildland gear bag storage. PPE, EMS, face masks.
	A	Turnout Washing and Drying	NA					10' X 16'	160	1	160	Extractor, dryer and hanging area
FS6	A	Janitor Room	200	13' X 17'	221	1	221	10' X 12'	120	1	120	Facility wide janitorial storage for supplies, service sink, mop rack, dedicated for App Bays and support areas
FS7	A	Communication Alcove	NA	4' X 10'	40	1	40	4' X 10'	40	1	40	Space for charging station, maps, computer and printer. Adjacent to the Captain's office
FS8	C	Work Bench Alcove	NA	4' X 20'	80	1	80	4' X 20'	80	1	80	Workbench area for vise, peg board, tool storage with large flat work surface

COUNTY OF MARIN FIRE DEPARTMENT
DRAFT - NEW FIRE STATION

FS9	C	Decontamination Alcove	NA	4' X 8'	32	1	32	8' X 10'	80	1	80	Service sink with spray hose faucet and floor drain
FS10	A	Hose Storage	NA	12' X 8'	96	1	96	14' X 8'	112	1	112	Alcove for hose storage racks. 2 three tier high racks
FS11	B	Special Projects Room	NA	10' X 12'	120	1	120	10' X 12'	120	1	120	Workbench and storage shelving
FS12	B	Emergency Supply Storage Room	10	5' X 5'	25	1	25	5' X 5'	25	1	25	Storage room for emergency supplies
TOTAL NUMBER OF SPACES						16				17		
NET SF SUBTOTAL			5,568				7,924				8,451	
SF TOTAL WITH CIRCULATION AND WALLS (20%)							9,509				10,141	

OFFICES												
PROGRAM												
SPACES			EXISTING	ORIGINAL				UPDATED				NOTES
Code	Finish	Name	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
FS13	B	Firefighter Workstations	164	18' X 14'	252	1	252	18' X 14'	252	1	252	Countertop workstations for 5 personnel, adjacent to the Captain's Office and night lobby. Provide space for lateral file cabinets, book shelving, station office supply storage and mailboxes
FS14	B	Shared Captain's Office	NA	18' X 14'	252	1	252	18' X 14'	252	1	252	Shared office for 3 Captains, one desk, flexible privacy, small conference area, space for 9 lateral files, and shelving
	B	BC Office	NA					12' X 14'	168	1	168	Shared office for BC, one desk, flexible privacy, small conference area, space for lateral files, and shelving
FS15	B	Station Night Lobby	88	10' X 10'	100	1	100	10' X 10'	100	1	100	Small secured entry point for public with seating
FS16	C	Station Public Restroom	78	8' X 8'	64	1	64	8' X 8'	64	1	64	Unisex, accessible near the Lobby
TOTAL NUMBER OF SPACES						4				5		
NET SF SUBTOTAL			330				668				836	
SF TOTAL WITH CIRCULATION AND WALLS (25%)							835				1,045	

COUNTY OF MARIN FIRE DEPARTMENT
DRAFT - NEW FIRE STATION

FIREFIGHTER LIVING QUARTERS												
PROGRAM												
SPACES			EXISTING	ORIGINAL				UPDATED				NOTES
Code	Finish	Name	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
FS17	C	Kitchen	256	14' X 20'	280	1	280	25' X 25'	625	1	625	Three refrigerators and pantries. Dishwasher, eight burner gas range with oven and hood. Large double sink with disposer. Open to Dining Area, adjacent to Patio. Separate coffee area.
FS18	B	Dining Area	264	21' X 20'	420	1	420	21' X 25'	525	1	525	Seating for 20 people, wall mounted TV, open to Kitchen and Dayroom
FS19	B	Dayroom	305	21' X 26'	546	1	546	28' X 25'	700	1	700	Space for 12 recliners, entertainment center, book shelving, open to Dining
FS20	B	Fitness Room	384	20' X 24'	480	1	480	30' X 30'	900	1	900	Space for three cardio pieces, one universal gym, free weights. Adequate light and ventilation. Durable floors and walls. Acoustic separation. Mirror, drinking fountain, storage
FS21	C	Accessible Fitness Restroom	NA	8' X 12.5'	100	1	100					Firefighter RRs are available for use
FS22	C	Laundry/Janitor Room	96	10' X 14'	140	1	140	10' X 16'	160	1	160	Two sets of commercial grade washer and dryer, service sink, countertop, storage shelving for janitorial supplies, linens. Mop sink and rack. Adjacent to Kitchen
FS23	B	Dorm Room	NA	11' X 25'	275	2	550	12' X 25'	300	2	600	Space for 4 beds and 12 wardrobe lockers
FS24	B	BC Quarters and Restroom	136	11' X 19'	209	1	209	11' X 19'	209	1	209	Bunk room with one bed, one night stand, three lockers and accessible restroom with shower
FS25	B	Firefighter Bunk Room	1,119	11' X 11'	121	9	1,089	11' X 13'	143	12	1,716	Bunk room with four wardrobe lockers, two beds and two nightstands
FS26	C	Firefighter Restroom	313	10' X 8'	80	6	480	10' X 8'	80	6	480	Operable window, sink, toilet, shower, mirror and counter
TOTAL NUMBER OF SPACES						24				26		
NET SF SUBTOTAL			2,873				4,294				5,915	
SF TOTAL WITH CIRCULATION AND WALLS (25%)							5,368				7,394	

COUNTY OF MARIN FIRE DEPARTMENT
DRAFT - NEW FIRE STATION

UTILITY SUPPORT SPACES												
PROGRAM												
SPACES			EXISTING	ORIGINAL				UPDATED				NOTES
Code	Finish	Name	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
	B	Recruit Restroom and Shower						10' X 11'	110	2	220	Refer to Fire Training Tower Program. One sink, toilet, and shower.
U1	D	General Building Storage	20	10' X 10'	100	1	100	10' X 10'	100	1	100	Storage for building supplies
U2	D	Mechanical Room	100	10' X 10'	100	1	100	10' X 10'	100	1	100	HVAC equipment, hot water heater, fire riser
U3	D	Electrical Room	25	5' X 10'	50	1	50	10' X 16'	160	1	160	Main service panel, fire alarm panel and sub panels. Larger space to accommodate new code requirements.
	D	Battery Room	NA	NA	0	0	0	10' X 10'	100	1	100	Space to accommodate new code requirements
U4	D	Communication	25	10' X 12'	120	1	120	10' X 12'	120	1	120	Telephone service, fire alerting system hub, server racks, radio equipment
TOTAL NUMBER OF SPACES						4				7		
NET SF SUBTOTAL			170				370				800	
SF TOTAL WITH CIRCULATION AND WALLS (20%)							463				960	
FIRE HQ STATION SF GRAND TOTAL							16,174					19,540

DRAFT - FIRE ADMINISTRATION RENOVATION AND EXPANSION

OFFICES AND WORKSTATIONS													
PROGRAM													
SPACES			EXISTING		ORIGINAL				UPDATED				NOTES
Code	Finish	Name	STAFF	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
ADMINISTRATION													
P02	B	Assistant Services Manager	1						12' X 14'	168	1	168	
po1	B	PIO	1						10 X 12	120	1	120	
P01	B	Assistant Services Associate	2						10' X 12'	120	2	240	
WS1	B	Assistant Services Technician	3						8' X 8'	64	3	192	
WS1	B	Department Analyst	1						8' X 8'	64	1	64	
WS1	B	TSC	1						8' X 8'	64	1	64	
WS1	B	Administration Assistant	1						8' X 8'	64	1	64	
WS1	B	Senior Clerk	2						8' X 8'	64	2	128	
WS1	B	Clerk	0						8' X 8'	64	1	64	
PRE-FIRE													
P02	B	Battalion Chief	1						12' X 14'	168	1	168	
P02	B	Manager	1						12' X 14'	168	1	168	
WS1	B	Technician	1						8' X 8'	64	1	64	
WS1	B	Coordinator	1						8' X 8'	64	1	64	
WS2	B	GIS Technician	0						8' X 10'	80	1	80	
TRAINING													
P02	B	Battalion Chief	1						12' X 14'	168	1	168	
P02	B	Captain	1						12' X 14'	168	1	168	
	B	Training Instructors	0						8' X 8'	64	3	192	This could be shared desks in an open work area
PREVENTION													
P02	B	Battalion Chief - Fire Marshall	1						12' X 14'	168	1	168	
P02	B	Captain	1						12' X 14'	168	1	168	
WS2	B	Plan Checker	2						8' X 10'	80	2	160	
WS1	B	Fire Inspector	1						8' X 8'	64	1	64	
WS1	B	Fire Inspector - Seasonal	3						8' X 8'	64	3	192	They could be a share spaces, mostly in the field
EMS													
P02	B	EMS Battalion Chief	1						12' X 14'	168	1	168	
P01	B	EMS Specialist	1						10' X 12'	120	1	120	
WS1	B	CQI	1						8' X 8'	64	1	64	
WS1	B	Training Educator	1						8' X 8'	64	1	64	
COMMAND													
P03	B	Fire Chief	1						12.5' X 26'	325	1	325	
P03	B	Deputy Fire Chief	1						14' X 16'	224	1	224	
P03	B	Deputy Director of Fire	1						14' X 16'	224	1	224	
TOTAL NUMBER OF SPACES			33				0				38		
NET SF SUBTOTAL				0			0					4,117	
SF TOTAL WITH CIRCULATION AND WALLS (30%)							0					5,352	

DRAFT - FIRE ADMINISTRATION RENOVATION AND EXPANSION

MEETING SPACES													
PROGRAM													
SPACES			EXISTING		ORIGINAL				UPDATED				NOTES
Code	Finish	Name	STAFF	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
	B	Training Classroom							28' X 32'	896	1	896	Classroom seating for 30
	B	Training Classroom Storage							28' X 8'	224	1	224	
	B	Small Conference Room							10' X 15'	150	1	150	
	B	Medium Conference Room							15 X 30'	450	1	450	
TOTAL NUMBER OF SPACES			0				0				4		
NET SF SUBTOTAL				0			0					1,720	
SF TOTAL WITH CIRCULATION AND WALLS (25%)								0					2,150

SUPPORT SPACES													
PROGRAM													
SPACES			EXISTING		ORIGINAL				UPDATED				NOTES
Code	Finish	Name	STAFF	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
	B	Lobby Area							6' X 8'	48	1	48	Reduced existing commercial kitchen. Use high end residential grade equipment
	B	Training Lobby							6' X 8'	48	1	48	
	B	Stairway							5' X 20'	100	2	200	
	B	Elevator							8' X 10'	80	1	80	
	B	Elevator Machine Room							8' X 10'	80	1	80	
	C	Public Gender Neutral Restroom							8' X 8'	64	2	128	
	C	Public Gender Specific Restrooms							20' X 20'	400	1	400	
	B	Work Room							10' X 18'	180	1	180	
	B	File Room							8' X 10'	80	1	80	
	B	Break Room							18' X 22'	396	1	396	
	B	Quiet Room							8' X 10'	80	1	80	
	C	Staff Gender Neutral Locker and Restroom							10' X 12'	120	1	120	Sinks, toilets, showers, and 3 full size lockers
	C	Men's Staff Locker Room and Restroom							16' X 30.5'	488	1	488	Sinks, toilets, showers, and 12 full size lockers
	C	Women's Staff Locker Room and Restroom							16' X 30.5'	488	1	488	Sinks, toilets, showers, and 12 full size lockers
	C	Janitor Room							8' X 10'	80	2	160	
TOTAL NUMBER OF SPACES			0				0				18		
NET SF SUBTOTAL				0			0					2,976	
SF TOTAL WITH CIRCULATION AND WALLS (25%)								0					3,720

DRAFT - FIRE ADMINISTRATION RENOVATION AND EXPANSION

UTILITY AND SUPPORT SPACES													
PROGRAM													
SPACES			EXISTING		ORIGINAL				UPDATED				NOTES
Code	Finish	Name	STAFF	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
	D	General Storage Room							36' X 50'	1,800	1	1,800	
	D	Mechanical Room							10' X 10'	100	1	100	
	D	Electrical Room							10' X 20'	200	1	200	
	D	Battery Room							10' X 10'	100	1	100	
	D	Communication							10' X 12'	120	1	120	
TOTAL NUMBER OF SPACES			0				0				5		
NET SF SUBTOTAL				0				0				2,320	
SF TOTAL WITH CIRCULATION AND WALLS (25%)							0					2,900	
FIRE ADMINISTRATION SF TOTAL				0			0					14,122	

DRAFT NEW TRAINING TOWER AND GROUNDS

TRAINING TOWER AND GROUNDS												
PROGRAM												
SPACES			EXISTING	ORIGINAL				UPDATED				NOTES
Code	Finish	Name	SF	Size	SF	QTY	TOTAL SF	Size	SF	QTY	TOTAL SF	
	D	Relocated Training Tower							494	1	494	HVAC equipment, hot water heater, fire riser
	D	Reserve Apparatus Storage Building						40' X 70'	2,800	1	2,800	Back in parking for the dozer transport trailer and truck, reserve engine and ambulance
	D	Covered Apparatus Parking						40' X 50'	2,000	1	2,000	Drive through parking for 3 engines
	D	Covered Outdoor Classroom						30' X 30'	900	1	900	Outdoor classroom for 40 using metal bleachers
	B	Recruit Restroom and Shower						10' X 11'	110	0	0	Refer to Fire Station Program. One sink, toilet, and shower.
TOTAL NUMBER OF SPACES						0				4		
NET SF SUBTOTAL			0				0				6,194	
SF TOTAL WITH CIRCULATION AND STRUCTURE (10%)							0				6,813	
TRAINING TOWER AND GROUNDS SF GRAND TOTAL							0				6,813	